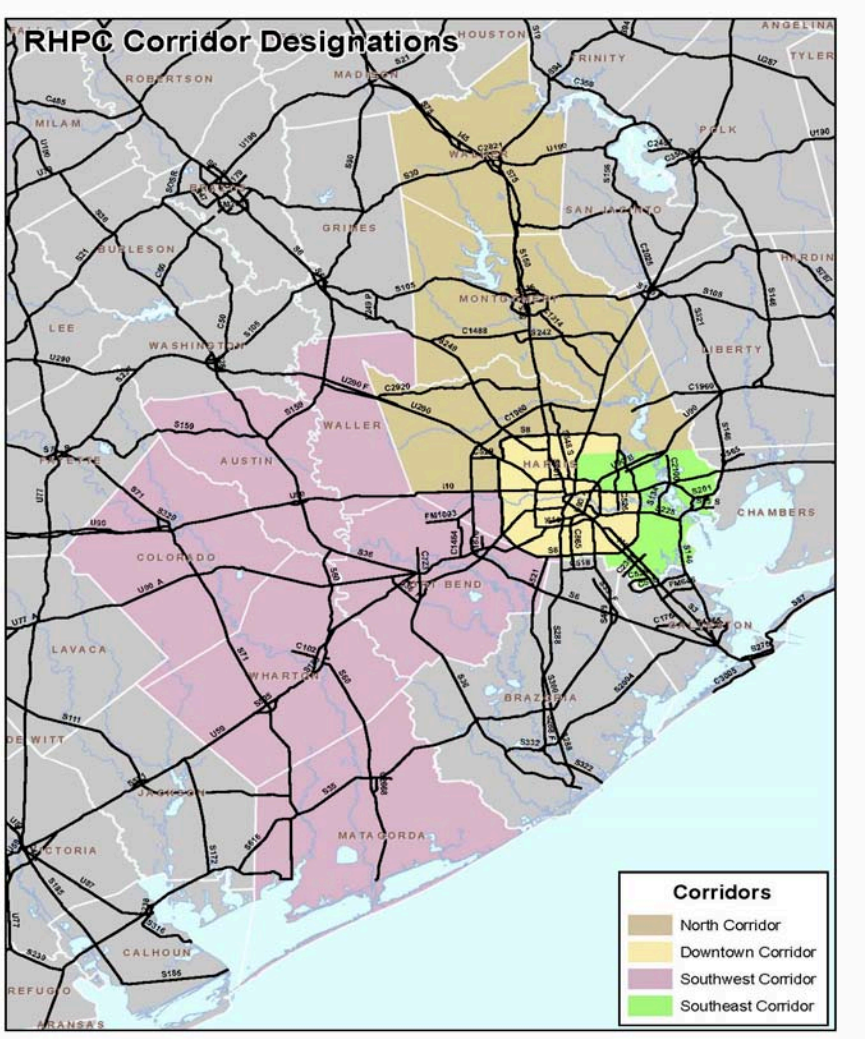
TSA-Q Regional Hospital Preparedness Council

All-Hazards Emergency Preparedness Plan

Catastrophic Medical Operations Center - Standard Operating Procedures



This plan is hereby approved for implementation and supersedes all previous editions.

RHPC – Chair	Date
RHPC – Chair	Date
SETTRAC Representative	Date

Record of Changes

Change Number and Date	Date of Entry	Signature

Catastrophic Regional Medical Operations Center

AUTHORITY

This plan was developed by the Regional Hospital Preparedness Council, with the involvement of TSA-Q disaster representatives, EMS leaders, City and County Leaders, SETTRAC membership, Houston Metropolitan Medical Response System, local Strategic National Stockpile coordinators, Houston-Galveston Council of Governments, and City and County Health Department representatives, in accordance with the Texas Division of Emergency Management standards for local emergency management plans pursuant to §418.043(a) of the Texas Government Code and in accordance with the existing plans, mandates and standard operating procedures of the City of Houston Office of Emergency Management.

PURPOSE

A) The purpose of this plan is to provide general guidelines for the mitigation and response to natural and manmade events that endanger the patients, visitors, staff, and family members of healthcare facilities within TSA-Q.

B) This plan describes how healthcare facilities within TSA-Q collectively mitigate, prepare for, respond to and recover from the effects of an emergency or disaster. It also addresses services and resources that can be, may be or cannot be provided in certain situations.

C) This plan outlines methods for assisting the staff of healthcare facilities within TSA-Q to deal with effects of disasters.

D) This document identifies resources in one of three categories:
   i) Resources that are dedicated for use for individual facilities
   ii) Regional resources that may or will be available to other facilities
   iii) Resources that might be needed within the facility that are not readily available and projected unmet needs

SCOPE

This plan is applicable in all natural and man-made emergency situations affecting the area residents, staff, patients, family members, and visitors of TSA Region Q.

SITUATION AND ASSUMPTIONS

A) **SITUATION**

i) Healthcare facilities within TSA-Q are located in the counties of Austin, Colorado, Fort Bend, Harris, Matagorda, Montgomery, Walker, Waller and Wharton. This region has experienced a variety of emergencies and disasters. A regional analysis of emergencies and disasters that have the potential to affect facilities within this region is located in Attachment 1 (Facility Hazard Vulnerability Analysis) of this document.

ii) The healthcare facilities' staff in this region is at risk from disasters that increase the likelihood and potential for a number of health and medical issues with the potential for causing extensive loss of life and damage to property and the environment.

iii) Prolonged or catastrophic events cause widespread disruptions of day-to-day life and have an adverse impact on those affected by these events.

iv) The Regional Hospital Preparedness Council (RHPC) has no ability to control these conditions. Thus, each facility must be prepared to address and provide comprehensive information on how natural and man-made disasters directly impact area residents, patients, visitors, staff, and family members while being able to ensure immediate action on behalf of those most severely affected.

v) Trauma Service Area Q (TSA-Q) as defined by the Department of State Health Services (DSHS). TSA-Q is divided geographically into four regions. These are designated "North Corridor", "Southwest Corridor", "Southeast Corridor" and "Downtown Corridor."

B) **GENERAL ASSUMPTIONS**

i) Each facility within TSA-Q will implement their facility specific, appropriate, and prudent plans and procedures when actually or potentially threatened by natural and/or man-made disasters.

ii) During emergencies, area residents, patients, visitors, staff, and family members of healthcare facilities within the region may experience numerous health problems. Some of these problems are attributable to pre-existing medical conditions complicated by the emergency while other problems may arise as a direct result of the event.

iii) The increased number of area residents and staff needing medical help may burden and/or overcome the health and medical infrastructure. This increase in demand may require a regional response and/or subsequent city, county, state, and/or federal-level assistance.

iv) A catastrophic event may cause such widespread damage that the existing internal response capacity and capability of healthcare facilities is curtailed or destroyed.

v) During some emergencies, it may be necessary to evacuate patients and staff from the affected area(s) and/or healthcare facilities.

vi) A Hazardous Vulnerability Analysis has been completed by the Regional Hospital Preparedness Council as well as individual facilities within the region.

CONCEPT OF OPERATIONS

A) **BACKGROUND**

i) The concept of operations outlined in this plan presumes a severe, catastrophic, or prolonged emergency is occurring or may be imminent. Implementation of procedures will begin as soon as practical after the event is predicted or occurs. Mitigation efforts will be practiced on an on-going basis with emphasis on awareness, preparedness, response, and recovery. Healthcare facility staff involvement in planning, training and exercising is essential.

ii) Staff efforts in awareness, alerts, notifications, preventive measures, and local responses are critical aspects of the overall strategy. Efforts will be made to foster individual involvement and to promote the idea of "neighbors helping neighbors" within the region. Effective facility-wide participation by administration, health and medical professionals, other staff, volunteers, outside health and medical providers and city/county emergency management personnel must be cultivated and sustained to ensure maximum protection of the patients, staff and area residents.

iii) The healthcare facilities within TSA-Q are part of a regional health care network in Southeast Texas which includes Austin, Colorado, Fort Bend, Harris, Montgomery, Matagorda, Walker, Waller and Wharton Counties, and as such have signed a Memorandum of Agreement (MOA) with the Southeast Texas Trauma Regional Advisory Council and the Regional Hospital Preparedness Council to plan, prepare, and respond to a regional disaster in a cooperative fashion. A copy of this MOA is attached. (See Annex 1: Geographic Areas within the Region). It is expected that the "neighbors helping neighbors" concept will apply to health care facilities within these corridors and may expand to ultimately involve all healthcare facilities within TSA-Q or beyond. During this time the ability to communicate between healthcare facilities within the same areas and throughout the entire region will be critical. Communication strategies have been developed to allow healthcare facilities' Emergency Operation Centers (EOCs) to communicate with each other and each facility's local city and/or county EOC, as applicable. Communication strategies available to healthcare facilities within TSA-Q include: telephone, fax, dedicated telephone lines, email, EMSystems, HMMRS, WebEOC, 800 MHz radios, and Ham Radio Operators.

iv) Mitigation and response actions will vary according to the specific conditions. Generally, these actions will follow a phase-in process based on the emergency type.

B) **CORRIDOR DESIGNATIONS**

Health care facilities (both "Acute Care" and "Specialty") are as designated as:

i) North Corridor:
- (a) Montgomery County
- (b) Northern Harris County
- (c) Walker County

ii) Southeast Corridor
- (a) Eastern Harris County

iii) Southwest Corridor
- (a) Austin County

(b) Colorado County
(c) Fort Bend County
(d) Matagorda County
(e) Western Harris County
(f) Wharton County
(g) Waller County

iv) Downtown Corridor
(a) Inside Beltway 8

C) **READINESS LEVELS**

i) Level 1 – Maximum Readiness

During an actual occurrence, the Regional Hospital Preparedness Council will implement actions to accomplish task assignments in accordance with applicable operational procedures. At this time, notification will be issued to the healthcare facilities throughout the region that the Catastrophic Medical Operations Center (CMOC) is operational. If the scope of the emergency expands to the point that facilities within the regional have exhausted or are depleting internal response assets, the Catastrophic Medical Operations Center (CMOC) will assist with coordination of requests with the following agencies: Local fire, police, EMS, city and/or county Emergency Management Offices, Texas Department of Public Safety, Texas Disaster District Committee, and/or Federal Emergency Management Administration, or other applicable agency.

ii) Level 2 – High Readiness

When an emergency is imminent, all applicable protective action plans and procedures will be activated. This includes opening the Catastrophic Medical Operations Center (CMOC) as requested, and implementing notification to the healthcare facilities throughout the region. A process is in place for reporting on-going events and assessing current factors and resources.

iii) Level 3 - Increased Readiness

When a disaster or catastrophic public health emergency is foreseen, such as a large outbreak of a contagious or infectious disease in a nearby city or county, or the approach of a major hurricane, activities will focus on warning people who will be potentially affected. The Regional Hospital Preparedness Council will encourage facilities to emphasize "neighbors helping neighbors" efforts. Appropriate mitigation and preparedness actions, including the "call-up" of the regional the Catastrophic Medical Operations Center, during this level may occur.

iv) Level 4 - Normal Conditions

During normal conditions, primary emphasis will focus on awareness, readiness (planning, information, training and exercising) and education. In addition, staff should complete training that is germane to applicable response activities. The facilities should conduct at least one annual exercise that includes testing disaster response with regional, city and/or county agencies.

Catastrophic Regional Medical Operations Center

ORGANIZATIONAL INFORMATION, CAPABILITIES AND RESOURCES

A) **MISSION STATEMENT**

The mission of the Regional Hospital Preparedness Council includes coordination of medical care and resources in response to the needs of the community.

B) **FUNCTIONAL ELEMENTS**

i) Direction and Control

(a) The Regional Hospital Preparedness Council will activate the Catastrophic Medical Operations Center (CMOC) according to the current Emergency Preparedness Plan on file at the City of Houston Office of Emergency Management.

(b) In accordance with guidelines from NIMS, the Catastrophic Medical Operations Center (CMOC) follows the Incident Command Structure. The Catastrophic Medical Operations Center (CMOC) organization chart is attached (Appendix 1).

(c) The CMOC operating staff may consist of the following:

(i) Commander
(ii) Recorder
(iii) Corridor Leaders
(iv) Transportation Sector
(v) Public Health
(vi) Special Needs

(d) In the event of a biological disaster, the CMOC supports the incorporation, under the Health Department arm, a group of designated experts in Infectious Disease and Infection Control to provide or help interpret information about agents and issues related to Bioterrorism and to help evaluate options and possible responses to problems related to Bioterrorism for this region.

(e) The CMOC is located in the Houston Emergency Center on the second floor in the Emergency Operations Center.

ii) External and Internal Warnings

(a) External Warnings

- Warning(s) of a potential disaster could come from a variety of sources. These include but are not limited to local Health Department, Fire Department, Police, FBI or other agency and may be delivered by telephone, FAX, e-mail, EMSystems or the media.

- Designated sources for receipt of warning for healthcare facilities within TSA-Q are available 24 hours a day, seven days a week.

- Multiple sources are available to provide redundancy in the system.

(b) Internal Warning

- Upon notification of receipt of an internal warning, the recipient will immediately contact their supervisor and initiate the warning sequence by relaying the information to the designated individual in their respective healthcare facility.

- If the incident is of a biological/pandemic/infectious nature, the local health department will be notified of the situation by Infection Control personnel or designee at the healthcare facility.

iii) External and Internal Communications

(a) External Communications with a variety of entities is critical for continued functioning of TSA-Q regional healthcare facilities. These external entities include, but are not limited to:

- Texas state agencies & TSA-Q Region Hospitals
- City/County Department of Health
- City/County Office of Emergency Management
- The Catastrophic Medical Operations Center (CMOC)
- The Texas Medical Center
- Fire/EMS
- Staff, patients and/or family members requesting information
- General public and media
- Frequent communications including number of received patients, available bed capacity, and available specialty services/beds, fatalities, requests for case dates, current guidelines regarding symptomotology, diagnosis, therapy or other recommendations.

- External communication within and between healthcare facilities and outside emergency organizations utilize existing communication systems. These systems include:
  (i) EMSystem
  (ii) Land Line Telephones
  (iii) Dedicated telephone lines
  (iv) 800 MgH radios
  (v) Fax
  (vi) Email
  (vii) WebEOC
  (viii) HAM Radios
  (ix) Satellite phones
  (x) Cellular phones

- Redundant systems are included to provide back up as some communication systems may experience failure under the severe stress of a natural or man-made disaster situation. Local and Regional resource status (beds, staff, ambulances, vaccines, drug stockpiles) as well as other event related information is available on the City of Houston Health Department secure web site at www.hmmrs.net. This information is also available at the City of Houston Emergency Operations Command Center at 713-884-4500, or through the Catastrophic Medical Operations Center (CMOC) at 713-884-4408..

Catastrophic Regional Medical Operations Center

EMERGENCY REGIONAL RESPONSE OF THE CMOC

Upon initial identification/notification of an emergency event, and upon receipt of the request to operationalize the CMOC, the following steps are initiated:

Upon activation of the Emergency Regional Preparedness plan, establishment of the Catastrophic Medical Operations Center (CMOC) will begin. CMOC follows the National Incident Management System (NIMS) guidelines of emergency incident management.

a) **STRUCTURE:**
   (1) The current Chair of the Regional Hospital Preparedness Council, or their designee, will serve as Medical Operations Section Chief
   (2) The Medical Operations Section Chief will receive a briefing of the situation and develop the command structure necessary to carry out the objectives of the section.
   (3) Hospital representatives, health department representatives, et al, will be notified of the activation of the CMOC and need for them to assume their post in the command center.
   (4) The Section Chief will brief all members of the CMOC on the mission and objectives of the section. A rotational schedule to provide 24/7 coverage during the event response will be established.

b) **NOTIFICATION:**
   (1) If not already notified, regional healthcare facilities within TSA-Q will be alerted and given relevant information regarding possible incoming patients.
   (2) Under recommendation of the CMOC and Houston Fire/Police Department, the facilities may be recommended to initiate lockdown/controlled access procedures.

c) **SURGE CAPACITY:**
   (1) The CMOC will facilitate additional surge capacity in the regional healthcares by recommending that patients currently under, or seeking treatment are reviewed to identify possible early discharge, determine disposition and/or possibility of transfer to an outside facility to ensure patient safety. Elective surgical procedures may be recommended to cease for the duration of the event.

   (2) Bed availability in the region's healthcare facilities will be monitored and updates requested from facilities on a regular basis, determined by the level of healthcare response required for each event.

   (3) CMOC will coordinate the transportation and assignment of all patients into healthcare facilities within the region, based on capacity and capability of the facilities. The coordination will allow for a safe, effective patient surge capacity into the region's healthcare facilities as well as proper and efficient utilization of the region's healthcare resources.

(4) The ability to care for large numbers of patients is dependent upon the availability of patient beds, adequate staffing (both clinical and non-clinical staff), necessary supplies and appropriate clinical and facility support**.** In a true "mass casualty" event, the number of ill or injured patients could exceed the capacity of the local healthcare system. Events with this potential include:

(a) A sudden, unanticipated incident in the community which has or may result in a very large number of patients.
(b) A sudden event that compromises the hospitals directly and therefore severely limiting the number of available beds in the community.
(c) A series of events that individually do not pose a threat but when combined results in a large number of patients or compromises the ability of the healthcare facility to provide service.

(5) The regional plan for surge capacity addresses acute infectious disease, botulinum intoxication or other acute chemical poisoning, burn and trauma, and radiation-induced injury requiring additional surge bed capabilities. In the event additional surge bed capacity is required for one of these aforementioned events, the CMOC will collect and collate specialty bed information from the participating facilities in TSA-Q, and place individuals in appropriate beds. Additional regional resources such as portable ventilators, minti units, and PPE are stored in a secured location with the City of Houston Office of Emergency Management and may be deployed to requesting facilities.

(6) Additionally, the regional response plan addresses regional risk vulnerabilities based on a regional HVA. Surge capacity for mass casualty incidents such as chemical plant explosions will follow the structure of bed assessment and assignment outlined previously in this document. Patient needs will be matched with healthcare facilities capacity and capability and the patients will be transported to appropriate healthcare facilities. The region also has available at its disposal, portable field hospitals supplied with supplies and equipment similar to the DMAT basic loads supplied by the Department of Homeland Security. These fully stocked field hospitals can be deployed in conjunction with the City of Houston Office of Emergency Management and Houston Emergency Medical Services. Staffing for these portable field hospitals will be accomplished by eliciting healthcare professionals from the Medical Schools and Schools of Nursing in the region, thereby not placing further undue burden upon healthcare facilities.

(7) While TSA-Q and RHPC has no jurisdictional oversight over the region, the CMOC will work with governing entities in the coordination of response, mitigation of adverse effects, and preparedness and planning to ensure emergency events do not adversely affect the quality, capacity, and continuity of healthcare operations for the region.

(8) The CMOC and all healthcare facilities in the TSA-Q region do not discriminate on patient placement, transportation, care or services based on minority status, race, religion, age, or country of origin.

d) **TRANSPORTATION**

(1) A transportation sector of the CMOC will be established and utilized to coordinate patient movement within and outside of the regional boundaries and healthcare facilities. The transport sector will include ground ambulances as well as air ambulance services.

(2) Working under the auspices of the City of Houston Office of Emergency Management, the CMOC has a collaborative relationship and inclusion in the requesting of services such as: Aviation, Metro, Public Works, EMS and all agencies/entities currently under Memorandum of Understanding with the City of Houston.

(3) The CMOC will coordinate with the City of Houston Office of Emergency Management and all entities currently engaged in a Memorandum of Understanding with the city of Houston Office of Emergency Management in securing alternative transportation means, such as, but not limited to; metro buses, aviation, school buses, wheelchair ambulances/bus to assist in transportation needs of the region.

(4) The CMOC will coordinate with alternative transportation means, such as, but not limited to; metro buses, aviation, school buses, wheelchair ambulances/bus to assist in transportation needs of the region.

e) **PATIENT TRACKING:**

(1) Patient movement within and outside the boundaries of the region will be tracked by the CMOC on an ongoing basis. This information will be held confidential under the federal Health Information Privacy Portability Act (HIPPA) and released only to individuals covered under such act as eligible to receive this information.

f) **EMERGENCY PRIVILEGES:**

(1) During a disaster in which the Regional Emergency Response Plan has been activated, healthcare facilities have the option to grant emergency privileges.

(2) Emergency privileges may be granted, at the discretion of the above, based on the following:

(a) A current picture hospital identification (ID) card

(b) A current license to practice and a valid picture ID issued by a state, federal or regulatory agency.

(c) Identification that the individual is a member of a Disaster Medical Assistance Team (DMAT).

(d) Identification indicating that the individual has been granted authority to render patient care in emergency circumstances; such authority being granted by a federal, state or municipal entity.

(e) Presentation by current hospital or medical staff member(s) with personal knowledge regarding practitioner's identity.

(f) Verification of credentials of those individuals granted emergency privileges with occur as soon as the situation allows it.

INTEGRATION WITH LOCAL, REGIONAL, STATE AND/OR FEDERAL RESPONSE EFFORTS

A) The CMOC recognizes its unique role and responsibilities to the general public and the medical community and will respond to community and national medical emergencies by providing coordination of regional assets, including, but not limited to; transportation, medical surge capacity, notifications, updates, patient tracking, and facility requests for resources.

B) The healthcare facilities within TSA-Q have been active participants in local, regional, state and federal emergency response planning and have signed a Memorandum of Agreement with the South East Texas Trauma Advisory Council (SETTRAC) and Regional Hospital Preparedness Council (RHPC) to collaborate in relief efforts that affect the Trauma Service Area – Q (TSA-Q), as well as neighboring Trauma Service Areas.

C) Healthcare facilities within the TSA-Q region have dedicated an experienced emergency response provider to represent the facility and the unique needs of the healthcare population at local and regional committees.

D) Community-wide or regional requests for assistance to medical emergencies will be communicated directly to The CMOC through various, redundant means. These systems include:

a. EMSystems
b. Web-EOC
c. Email
d. Fax
e. Telephone lines
f. 800 MgH radios
g. HAM radios

E) **Inter-operability Assumptions**

i) In a major event/mass casualty situation healthcare facilities within the region may require regional, state and/or federal assistance to continue to care for those requiring medical assistance.

ii) Regional healthcare facilities' ability to acquire state and/or federal assistance is dependent on the activation of the local emergency response system.

iii) Once the local system is operational, all requests for assistance must go through the local emergency response system in order to activate state and federal resources.

iv) Response system activation is a process of activating essential resources to respond to a large-scale event (natural or man-made). Activation of some essential resources must be done through a formal emergency management activation, which begins at the local level and moves through a systematic process to the Federal level.

v) Pending confirmation that a large-scale event is in progress, regional healthcare facilities will activate their internal response plan for initial care.

vi) Activation of the local emergency response system triggers activation of the regional emergency operations response plan (Catastrophic Medical Operations Center).

MEMORANDUM OF UNDERSTANDING (MOU)

In a community wide event, MOU's between healthcare facilities are designed to allow the following:

(a) Transfer of patients between facilities to optimize care for patients and the community.
(b) Exchange of needed supplies, equipment or pharmaceuticals.
(c) Ability to exchange staff or send staff from one facility with their patients to another.

COMMUNITY INVOLVEMENT

Upon activation of the local EOC/Catastrophic Medical Operations Center (CMOC) and/or the NDMS; the CMOC will require the following information on a frequent basis:

A) Bed capacity
B) Staffing levels
C) Facility capabilities
D) Epidemiological projections if applicable
E) Casualty estimates
F) Specialty Services available

i) Since activation and utilization of regional resources requires time arrange, healthcare facilities within the region will notify the local EOC/CMOC as early as possible if actions to care for mass casualties at this facility will be insufficient and forward movement of patients is likely to become necessary.

ii) The CMOC has MOU agreements with the following healthcare facilities in TSA-Q:

Beacon Health, LTD - The Woodlands
Bellville General Hospital
CHRISTUS St. Catherine Hospital
CHRISTUS St. John Hospital
Clear Lake Regional Medical Center
Colorado-Fayette Medical Center
Cornerstone of Houston - Westbury
Conroe Regional Medical Center
Cypress Creek Hospital
Cypress Fairbanks Medical Center
Doctors Hospital Parkway
East Houston Regional Medical Center
El Campo Memorial Hospital
Gulf Coast Medical Center
Harris County Psychiatric Hospital
Healthsouth Houston Rehabilitation Institute
Healthsouth Rehab Hospital of North Houston
Healthsouth Rehabilitation Hospital of Humble
Intracare Medical Center Hospital
Kindred Hospital - Houston
Kindred Hospital - Northwest
Kingwood Health Center
Kingwood Medical Center
Lyndon B. Johnson General Hospital
Michael E. DeBakey VA Medical Center
Northeast Medical Center Hospital
Oak Bend Medical Center
Palacios Community Medical Center
Park Plaza Hospital
Quentin Mease Community Hospital
Riverside General Hospital
SCCI Hospital Houston Central
Spring Branch Rehabilitation Center
St Lukes Episcopal Hospital
Texas Orthopedic Hospital
The Institute for Rehabilitation and Research
The Woman's Hospital of Texas
TOPS Surgical Specialty Hospital
Triumph Hospital Northwest
Triumph Hospital Southwest
Twelve Oaks Hospital - Bellaire
West Houston Medical Center
West Oaks Hospital

Catastrophic Regional Medical Operations Center

The CMOC has HRSA funding and intergrated planning, response and recovery agreements with the following healthcare facilities in TSA-Q:

Bayshore Medical Center
Nexus Specialty Hospital
Bellaire General - out of service
Bellville General Hospital
Ben Taub General Hospital
CHRISTUS St. John Hospital
CHRISTUS St. Joseph Hospital
CHRISTUS St. Catherine Hospital
Clear Lake Regional Medical Center
Clear Lake Rehabilitation Hospital
Colorado-Fayette Medical Center
Columbus Community Hospital
Cornerstone of Houston - Bellaire - closed
Cornerstone of Houston - Clearlake
Cornerstone of Houston - Westbury
Conroe Regional Medical Center
Cypress Creek Hospital
Cypress Fairbanks Medical Center
Doctors Hospital Parkway
Doctors Hospital Tidwell
CHRISTUS Dubuis Hospital
East Houston Regional Medical Center
El Campo Memorial Hospital
Gulf Coast Medical Center
Harris County Psychiatric Hospital
Healthbridge Children's Hospital
Healthsouth Houston for Specialized Surgery
Healthsouth Houston Rehabilitation Institute
Healthsouth Rehabilitation Hospital of Humble
Healthsouth Rehab Hospital of North Houston
Renaissance Hospital
Houston Northwest Medical Center
Michael E. DeBakey VA Medical Center
Huntsville Memorial Hospital
Intracare Medical Center Hospital
Intracare North Hospital
Kindred Hospital - Bay Area
Kindred Hospital - Houston
Kindred Hospital - Northwest
Kingwood Health Center
Kingwood Medical Center
Lyndon B. Johnson General Hospital
UT MD Anderson Cancer Hospital
Matagorda General Hospital
Memorial Hermann Children's Hospital
Memorial Hermann Continuing Care - Gessner
Memorial Hermann Continuing Care - Northwest
Memorial Hermann Continuing Care - SW
Memorial Hermann Hospital - Fort Bend
Memorial Hermann Hospital
Memorial Hermann Hospital - Katy
Memorial Hermann Hospital - Memorial City
Memorial Hermann Hospital - Northwest
Memorial Hermann Hospital - Southeast
Memorial Hermann Hospital - Southwest
Memorial Hermann Hospital - The Woodlands
Methodist Hospital - Sugarland
Methodist Hospital - Willowbrook
Northeast Medical Center Hospital
Palacios Community Medical Center
Park Plaza Hospital
Plaza Specialty Hospital
Oak Bend Medical Center
Quentin Mease Community Hospital
Rice Medical Center
Riverside General Hospital
San Jacinto Methodist Hospital
Triumph Hospital Central Houston
Select Specialty Hospital - Heights
Select Specialty Hospital - Conroe
Select Specialty Hospital - Medical Center
Select Specialty Hospital - West
Texas Children's Hospital - 2
Spring Branch Medical Center
Spring Branch Rehabilitation Center
St. Luke’s Community Hospital - The Woodlands
St Luke’s Episcopal Hospital
Texas Children's Hospital
Texas Orthopedic Hospital
Texas Specialty Hospital of Houston
The Institute for Rehabilitation and Research
The Methodist Hospital
The Woman's Hospital of Texas
Tomball Regional Hospital
Triumph Hospital North Houston
Triumph Hospital Baytown
Triumph Hospital East Houston
Triumph Hospital Northwest
Triumph Hospital Southwest
Twelve Oaks Hospital - Bellaire
Twelve Oaks Hospital - River Oaks
Vista Medical Center Hospital
West Houston Medical Center
West Oaks Hospital

MASS CARE FOR AGENT EXPOSURE

A) In a natural or man-made disaster where an exposure to a chemical, biological, and/or radiological agent is either known or suspected, care must be taken to prevent facility contamination, staff contamination, and/or person-to-person transmission.

B) Each healthcare facility within the region has the capability to provide decontamination to at least six patients in a three hour period. It is recommended to the healthcare facilities within the region that designated areas may be required for different populations of patients dependent upon their clinical signs and symptoms and/or exposure to the agent.

C) Additional area designations may include the following:

i) Designated **entrances** identified for:
   (a) Staff (screened for symptoms)
   (b) Symptomatic patients
   (c) Symptom-free but possibly exposed patients
   (d) Exposed patients with symptoms
   (e) Delivery of supplies

ii) Designated **locations** identified for:
   (a) Staff "clean" or "safe" areas for routine work, break locations and other non-patient care activities. For placement of patients requiring negative pressure areas.
   (b) For patients requiring decontamination prior to entering facility

D) A decontamination and PPE requirement for a regional response to agent exposure begins with a coordinated plan in the field and continues through patient disposition from the healthcare facility. Standardization of decontamination showers and PPE has been achieved through all healthcare facilities. All facility identified staff have been trained in the same manner, on the same equipment, and on the same procedures for mass care related to a chemical event. This standardization allows for forward movement and resource sharing amongst all participating healthcare facilities. Guidelines in regards to decontamination shower location, selection, lighting, water temperature, and run-off containment have been provided to all participating healthcare facilities and strongly encouraged to be adopted into their facility specific plans. Regional training for the decontamination of ambulatory and non-ambulatory patients, as well as pediatric patients, have been provided to each participating facility and strongly encouraged to be adopted into their facility specific plans.

E) **POST-MORTEM CARE** for mass casualties includes identification of procedures for handling remains. In a mass fatality situation where very large number of casualties will occur, refrigerated metal vehicles may be required as additional locations. CMOC will assist in their procurement.

F) **MENTAL HEALTH SERVICES** are a key component for a response to and recovery from a natural or man-made event. This support is required for victims, survivors, responders, family members and members of the community who are concerned that they are affected ("worried well"). A Presidential declaration of a disaster will facilitate deployment of Mental Health Teams from the American Red Cross.

G) **CONFIDENTIALITY:**

i) The Health Insurance Portability and Accountability Act (HIPAA) provides strict guidelines for hospitals to protect patient confidentiality. Due to requirements for disease reporting, Local Health Departments are exempt from this Act. During a declared disaster, exceptions to HIPAA also occur so that patient information may be shared with other facilities and response agencies.

EVACUATION OF HEALTHCARE FACILITIES WITHIN THE REGION

A) If the facility Incident Commander believes the patients, visitors, hospital and/or medical staff are at risk by staying either in portions or in the entire facility; he/she may consider evacuating their facility. In this event the following steps are recommended. Patients are evacuated to the following destinations:

(a) Within the existing facility (if possible).
(b) Similar facilities under MOU/MOA.
(c) Facilities within the same geographical area or region.
(d) Facilities outside the region.

B) If the facility Incident Commander determines the need to evacuate outside of their facility, then he/she coordinates with the local EOC/Catastrophic Medical Operations Center (CMOC) and proceeds with the evacuation plans.

C) Give specifics of the situation including a request for whatever assistance is required.

D) Coordinate with the Catastrophic Medical Operations Center (CMOC) to identify potential destinations for the patients. Information required includes type of beds and other key clinical needs of the patients being transferred.

E) The Catastrophic Medical Operations Center (CMOC) will provide whatever resource support possible to assist the facility with, or in avoiding, an evacuation and will alert transport agencies, who will require time to place assets into participation for the evacuation.

DEVELOPMENT AND MAINENANCE

A) **DEVELOPMENT**

i) This plan is designed to identify a range of actions to be taken by the Catastrophic Medical Operations Center (CMOC) to support participating regional healthcare facilities and to coordinate assistance to hospitals, healthcare facilities and medical staff, as well as patients when an event presents an increase in demand for health and medical services.

ii) This plan is based on certain assumptions and the existence of specific resources and capabilities that are subject to change. Flexibility is therefore built into this plan. Some variations in the implementation of the concepts identified in this plan may be necessary to protect the health and safety of patients, healthcare facilities, and staff.

B) **MAINTENANCE**

i) The Regional Hospital Preparedness Council will review and, if necessary update this plan at least annually. Revisions will reflect changes in procedures, improved methods, identified "Best

Practices", changes in availability of resources, and corrections of any deficiencies or omissions.

ii) This plan was coordinated with the City of Houston Office of Emergency Management, the Regional Hospital Preparedness Council, Houston Area Hospital Emergency Preparedness Collaborative, Southeast Texas Trauma Regional Advisory Council (SETTRAC), City of Houston Department of Health and Human Services, Harris County Department of Health and Human Services, The Texas Medical Center, Houston/Galveston Council of Governments, and the City of Houston Fire/EMS Services, per applicable regulations. A copy of the plan is on file in the City of Houston Office of Emergency Management, State of Texas Department of Health and Human Services Emergency Preparedness Division offices, office of the Chair of the Regional Hospital Preparedness Council, and the SETTRAC administrative office.

Catastrophic Regional Medical Operations Center

TSA-Q Regional Hazards Vulnerability Analysis
January 2006

	PROBABILITY				RISK					PREPAREDNESS			TOTAL
	High	Med	Low	None	Life Threaten	Health and Safety	High Disruption	Moderate Disruption	Low Disruption	Poor	Fair	Good	
SCORE	3	2	1	0	5	4	3	2	1	3	2	1	
NATURAL EVENTS													
Hurricane	X					X						X	8
Tornado		X						X			X		6
Severe Thunderstorm	X						X					X	7
Snow fall			X						X	X			5
Blizzard				X					X	X			4
Ice Storm			X						X	X			5
Earthquake				X			X			X			6
Tidal Wave				X			X			X			6
Temperature Extremes	X					X					X		9
Drought	X							X			X		7
Flood, External	X					X						X	8
Wild Fire		X					X					X	6
Landslide			X					X		X			6
Volcano				X				X		X			5
Epidemic	X				X						X		10

Catastrophic Regional Medical Operations Center

TSA-Q Regional Hazards Vulnerability Analysis
January 2006

EVENT	PROBABILITY				RISK					PREPAREDNESS			TOTAL
	High	Med	Low	None	Life Threaten	Health and Safety	High Disruption	Moderate Disruption	Low Disruption	Poor	Fair	Good	
SCORE	3	2	1	0	5	4	3	2	1	3	2	1	
TECHNOLOGICAL EVENTS													
Electrical Failure		X				X						X	7
Generator Failure		X			X							X	8
Transportation Failure	X					X					X		9
Fuel Shortage	X						X				X		8
Natural Gas Failure		X					X				X		7
Water Failure			X				X				X		6
Sewer Failure		X						X			X		6
Steam Failure			X						X			X	3
Fire Alarm Failure			X		X							X	7
Communications Failure		X						X				X	5
Medical Gas Failure			X		X							X	7
Medical Vacuum Failure			X		X							X	7
HVAC Failure			X		X							X	7
Information Systems Failure		X						X				X	5
Fire, Internal			X			X						X	6
Flood, Internal		X						X				X	5
Hazmat Exposure, Internal		X				X						X	7
Unavailability of Supplies		X				X					X		8
Structural Damage		X				X					X		8

Catastrophic Regional Medical Operations Center

TSA-Q Regional Hazards Vulnerability Analysis
January 2006

EVENT	PROBABILITY				RISK					PREPAREDNESS			TOTAL
	High	Med	Low	None	Life Threaten	Health and Safety	High Disruption	Moderate Disruption	Low Disruption	Poor	Fair	Good	
SCORE	3	2	1	0	5	4	3	2	1	3	2	1	
HUMAN EVENTS													
Mass Casualty Incident (trauma)	X				X					X			11
Mass Casualty Incident (medical)	X				X					X			11
Mass Casualty incident (hazmat)	X				X						X		10
Hazmat Exposure, External	X				X						X		10
Terrorism, Chemical	X				X						X		10
Terrorism, Biological		X			X						X		9
VIP Situation	X								X			X	5
Infant Abduction	X					X						X	9
Hostage Situation		X				X					X		8
Civil Disturbance		X				X				X			9
Labor Action		X					X			X			8
Forensic Admission		X							X			X	4
Bomb Threat		X				X						X	7

Catastrophic Regional Medical Operations Center

Attachment 2: TSA-Q Hospital Resources

The following resource management chart identifies the current regional healthcare facility resources

Date_____

RESOURCE	STATUS*	COMMENTS
Beds & linens	Y	
Non-essential medical supplies	Y	
Emergency Medical Transportation	Y	
Communications Equipment	Y	
Vaccinations	U	
Wheelchairs	Y	
Personnel	Y	
Oxygen	Y	
Drugs other than antibiotics	Y	19 Chempack locations
Antibiotics - Quinolones - Tetracyclines - Aminoglycosides - Other Anti-virals -Tamiflu	*Y	All facilities have on hand a cache of Doxycycline 100mg for all staff and physicians, including their family members for 2 doses per day x 3 days. 15% of the cache is suspension to provide antibiotic prophylaxis to the pediatric population (based on 2003 census).
Personal Protective Equipment: - N95 masks - Regular masks - Gowns - Gloves - Goggles	Y	Total protection within TSA – Q Hospitals Level A – 0 Level B – 0 Level C – 1073 Level D - approx. 99258 N-95 Masks – approx. 81187
Blood & blood products	U	
Food & water	Y	
Portable generators	Y	Each facility has back-up generator power.
Fuel	U	Dependant upon notification time.
Fans & Heaters	U	

- **Y** = Sufficient on hand for at least 72 hours after disaster;
- **U** = Unmet need; depending on other resources for supply;
- **S** = Resource on hand and will share if not needed*
- **M** = Resource on hand and may share depending upon situation

Catastrophic Regional Medical Operations Center

Appendix 2:
Contact Information

Internal Communications

NAME	PHONE	PAGER	E-MAIL	FAX

External Communications

ID	PHONE	FAX	E-MAIL	OTHER
Local EOC				
Local Health Dept				
State Health Dept				
Local OEM				
Catastrophic Medical Operations Center				

Catastrophic Regional Medical Operations Center

Appendix 5A: CDC Category A Biological Agents

Disease	Agent	Precautions	Comments
Anthrax	*B. anthracis*	Standard	▪ No person-to-person spread of vegetative bacteria Spores infective form ("white powder")
Tularemia	*F. tularensis*	Standard	▪ No person-to-person spread ▪ Notify laboratory personnel (Lab-acquired infections reported)
Pneumonic Plague	*Yersinia pestis*	Standard + Droplet	▪ Regular mask to enter the room ▪ Respiratory hygiene during patient transport.
Smallpox	Variola	Standard + Contact + Airborne	▪ Negative pressure room ▪ Gloves, gown, shoe covers, N95 mask to enter the room. (Do not re-use N95 mask) ▪ Respiratory hygiene during patient transport. All waste and linens are considered potentially infectious
Hemorrhagic Fever Viruses	Ebola, Marburg, Lassa, Machupo	Standard + Airborne	▪ Potential aerosolization of blood SPECIAL VHF PRECAUTIONS ▪ Negative pressure room ▪ Gloves, gown, shoe covers, leg covers, goggles and N95 mask to enter the room. (Do not re-use N95 mask.) ▪ Respiratory hygiene during patient transport.
Fever	*Coxiella burnetii*	Standard	▪ No person-to-person spread

			▪ Natural infection occurs by inhalation of contaminated aerosols containing animal waste
Brucellosis	*Brucella species*	Standard	▪ No person-to-person spread ▪ Natural infection often occurs by ingestion of contaminated milk & milk products
Glanders	*Burkholderia mallei*	Standard	▪ No person-to-person spread ▪ Rare cause of natural infection in horses ▪ Notify laboratory personnel (Lab acquired infections reported)
Meliodosis	*Burkholderia pseudomallei*	Standard	▪ No person-to-person spread
GI Disease: Fever, Abdominal pain Diarrhea	*Salmonella spp.* *Shigella spp.* *Vibrio cholerae*	Standard	▪ No person-to-person spread ▪ Ingestion of contaminated food/water
Acute Respiratory Distress	*Alpha viruses:* *Venezuelan Equine Encephalitis (VEE)* *Eastern, Western Equine Encephalitis*	Standard	▪ No person-to-person spread ▪ Transmitted via mosquito bite; birds and horses also susceptible and may serve as reservoir

Appendix 5C:
CDC LIST OF OTHER HIGH PRIORITY AGENTS
(Category B/C)*:

CATEGORY B AGENTS	DISEASE
Coxiella burnetii	Q Fever
Brucella species	Brucellosis
Burkholderia mallei	Glanders
Ricin Toxin (from castor beans)	Acute respiratory distress*[3]
Staphyloccocus Enterotoxin B	Acute respiratory distress*[3]
Venezuelan Equine Encephalitis Virus (VEE)	Encephalitis
Food/Waterborne pathogens - *Salmonella, Shigella* - *Vibrio cholerae, Cryptosporidium*	GI signs & symptoms
Category C Agents include emerging pathogens that could be engineered for mass dissemination in the future due to availability and ease of production and dissemination. These include Nipah Virus, and Hanta Viruses.	

* With the exception of anthrax spores, ("powder") all CDC category A, B and C biological agents are susceptible to disinfectants routinely used to clean healthcare facilities.

To obtain guidelines for cleaning rooms contaminated with anthrax spores contact your local health department.

For complete summary of Infection Control guidelines for patients with suspected or known disease caused by bioterrorism agents including isolation precautions, patient placement, patient transport, cleaning, disinfection of equipment, post-mortem care see Appendix 5C.Bioterrorism Symptomology

Catastrophic Regional Medical Operations Center

Neg. Pressure rooms: *PHONE #s* **Inf. Disease Service:** **Inf. Control:** **Health Dept:**	**BACTERIAL DISEASES**	Anthrax	Brucellosis	Cholera	Glanders	Bubonic plague	Pneumonic plague	Tularemia	Q Fever	**VIRAL DISEASES**	Smallpox	Venez, Equine Encephalitis	Viral Encephalitis	Viral Hemor. Fever	**BIOLOGICAL TOXICOSIS**	Botulism	Ricin exposure	T2-Mycotoxin exposure	Staph. Enterotoxin B Exposure
(1) ISOLATION PRECAUTIONS																			
Standard precautions for all aspects of care		X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X
Contact precautions											X			X					
Airborne precautions											X			X					
N95/HEPA mask to enter the room (HCW)											X			X					
Droplet precautions							X												
Wash hands with antimicrobial soap			X	X							X			X					
PATIENT PLACEMENT																			
No restrictions		X														X	X	X	X
Private room or cohort like patients			X	X	X	X	X	X	X		X	X	X	X					
Negative pressure room: Door closed with ante-room.											X			X					
PATIENT TRANSPORT																			
No restrictions		X						X	X							X	X	X	X
Limited movement: essential medical purposes only				X	X	X	X												
Respiratory Hygiene for patient (Regular mask during transport)							X				X			X					

Catastrophic Regional Medical Operations Center

Note: Guidelines are followed for SUSPECTED as well as known cases.
PPEs: Contact precautions: Gloves, gown, regular mask if needed
Droplet precautions: Regular or N95 mask
Contact plus Airborne precautions for Smallpox & VHF: Gloves, gown, N95 mask, goggles/eye protection
For smallpox: add shoe covers

Catastrophic Regional Medical Operations Center

Continued: A Appendix 5C	**BACTERIAL DISEASES**	Anthrax	Brucellosis	Cholera	Glanders	Bubonic plague	Pneumonic plague	Tularemia	Q Fever	**VIRAL DISEASES**	Smallpox	Venez, Equine Encephalitis	Viral Encephalitis	Viral Hemor. Fever	**BIOLOGICAL TOXICOSIS**	Botulism	Ricin exposure	T2-Mycotoxin exposure	Staph. Enterotoxin B Exposure
CLEANING & DISINFECTION OF EQUIPMENT																			
Routine cleaning of room with hospital approved disinfectant		X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X
Additional disinfection of all surfaces with hospital approved disinfectant.											X			X					
Dedicated equipment disinfected prior to leaving the room											X			X					
Routine linen management		X	X	X	X	X	X	X	X			X	X	X		X	X	X	X
Linen requires special handling*											X								
Regulated medical waste handled as policy		X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X
DISCHARGE MANAGEMENT																			
No special discharge instructions necessary unless symptomatic		X		X	X	X	X	X	X			X	X			X	X	X	X

Catastrophic Regional Medical Operations Center

Appendix 6

Biological Terrorism Information by Symptomology

Differential diagnosis	Bioterrorism threat disease description	Initial laboratory & other diagnostic test results	Immediate public health & infection control actions	Treatment & PEP
Acute Respiratory Distress with Fever				
Dissecting aortic aneurysm, inhalational anthrax, pulmonary embolism	**Inhalational Anthrax** Incubation from 1-6 days, but may be as long as 60 days Abrupt onset of fever with drenching sweats; nausea and vomiting; chest pain; minimal or nonproductive cough; respiratory distress*;nasal symptoms are usually absent;* chest x-ray may show mediastinal widening, pleural effusions, and infiltrates; initial WBC may be normal to slightly elevated with a left shift; no history of trauma or chronic disease; progression to shock and death within 24-36 hours High fatality for inhalation Anthrax	Chest x-ray with widened mediastinum; gram-positive bacilli in sputa, blood, or CSF; confirmatory testing available through public health laboratory network. Cutaneous-culture unopened vesicle or swab beneath eschar without removing eschar GI-culture blood and stool. Cultures should be sent to a BSL Level-2 clinical lab. Nasal swabs are **not** recommended as a diagnostic tool.	Call Local Health Department. Alert laboratory to possibility of anthrax. Standard precautions-not transmitted from person to person; instruments used for invasive procedures or autopsy should be disinfected with a sporocidal agent (sodium hypochlorite)	]-IV ciprofloxacin or doxycycline **and** 1 or 2 additional antibiotics (clind, rifampin, van, amp, chloro) for 60 days PEP-doxycycline , or ciprofloxacin for 60 days; or ciprofloxacin or doxycycline for 30 days if vaccine available
Community acquired pneumonia, Hantavirus Pulmonary Syndrome, meningococcemia, pneumonic plague, rickettsiosis	**Pneumonic Plague** Incubation 2-3 days following inhalation Apparent severe community-acquired pneumonia but with hemoptysis, cyanosis, gastrointestinal symptoms, shock High fatality unless treated early	Gram-negative bacilli or coccobacilli in sputa, blood or lymph node; bipolar appearance with Wright or Giemsa stain; Culture blood, CSF if meningeal symptoms present, and bubo. Cultures should be sent to a BSL Level-2 clinical lab. Confirmatory testing available through public health laboratory network.	In addition to standard precautions, droplet precautions with a regular surgical mask for pneumonic plague; Call hospital infection control and Local Health Department. Ask family members/close contacts of patient to stay at the hospital (if already present) for public health interview/chemoprophylaxis; get detailed address and phone number information. Alert laboratory of possibility of plague.	]-Streptomycin (SM) or gentamicin if SM not available for 10 days; Chloramphenicol for meningitis. PEP-doxycycline or ciprofloxacin for 7 days or duration of risk whichever is longer; no vaccine is available in US
Plague, Q fever, Staphylococcal enterotoxin B, phosgene, tularemia	Ricin (aerosolized) Incubation 18-24 hours after inhalation Acute onset of fever, chest pain and cough, progressing to respiratory distress and hypoxemia; not improved with antibiotics; death in 36-72 hours High fatality	Chest x-ray with pulmonary edema. Consult with Local Health Department regarding specimen collection and diagnostic testing procedures.	Call Local Health Department. Standard precautions.	]-supportive; GI decontamination with activated charcoal and cathartics if ingested. PEP-no current available vaccine or antitoxin available
Influenza, adenovirus,	**Staphylococcal enterotoxin B(SEB)** Incubation 3-18 hours after inhalation	Intoxication with SEB is clinical and epidemiological with large number of people	Call Local Health Department. Standard precautions.	]-supportive no vaccine

mycoplasma	Acute onset of fever, chills, headache, nonproductive cough and myalgia (influenza-like illness) with a NORMAL chest x-ray; dry cough can last up to 4 weeks-low mortality	ill within a 24 hour time period. Consult with Local Health Department regarding specimen collection and diagnostic testing procedures.		
Acute Rash with Fever				
Varicella, disseminated herpes zoster, vaccinia, monkeypox, cowpox	**Smallpox** Incubation 12-14 days 2-3 days of a FLI followed by a papular rash with fever that begins on the face and extremities and uniformly progresses to vesicles and pustules; Typically more prominent on the face and extremities, and lesions develop at the same time; headache, vomiting, back pain, and delirium common 30 % fatality rate	Clinical with laboratory confirmation; vaccinated, gowned and gloved person obtains specimens (scabs or swabs of vesicular or pustular fluid). Place material in a sterile tube sealed with tape and double bagged in a biohazard bag. Call public health immediately before obtaining specimen; Laboratory examination requires a BSL Level-4 facility. Definitive testing available through public health laboratory network.	Call hospital infection control and local Health Department immediately. In addition to standard precautions, contact and airborne precautions required in a negative pressure room. Ask family members/close contacts of patient to stay at the hospital (if already present) for public health interview and vaccination; get detailed address and phone number information. Quarantine with airborne isolation for secondary contacts up to 17 days post-exposure since asymptomatic people can still shed virus.	]-Antivirals for use against smallpox are under investigation. Cidofovir has been shown to have significant *in vitro* and *in vivo* activities in animals. PEP-Vaccinia vaccine within 3-4 days after exposure can prevent disease in many people and prevent death in most. More than 7 days after exposure, some experts would give vaccinia immune globulin.
Meningococcemia, malaria, typhus, leptospirosis, borreliosis, thrombotic thrombocytopenic purpura (TTP), Hemolytic Uremic Syndrome (HUS)	**Viral Hemorrhagic Fever (e.g. Ebola)** **Incubation period about 5-10 days (range 2-19 days)** Fever with mucous membrane bleeding, petechiae, thrombocytopenia and hypotension in a patient without underlying malignancy High fatality for some strains	Definitive testing available through public health laboratory network—call public health immediately. Viral isolation must be done in a BSL Level-4 facility	Call hospital infection control and Local Health Department. Standard and contact precautions. If large amounts of blood/aerosols of blood likely, use airborne precautions. Ask family members/close contacts of patient to stay at the hospital (if already present) for public health interview and follow-up; get detailed address and phone number information. Decontaminate with sodium hypochlorite or a phenolic disinfectant. VHF have significant quantity of virus in blood, therefore, use special handling when working with blood or body fluids.	]supportive; antiviral some will respond to ribavirin PEP-ribavirin for high risk contacts (direct exposure to blood or body fluids)

Neurologic Syndromes				
uillain-Barre Syndrome; myasthenia gravis; midbrain stroke; tick paralysis; Mg+ + intoxication; organophosphate, carbon monoxide, paralytic shellfish, or belladonna-like alkaloid poisoning; polio; Eaton-Lambert myasthenic syndrome	**Botulism** Incubation 24-36 hours up to several days with inhalation Acute, afebrile, symmetric, descending flaccid paralysis with prominent bulbar involvement (diplopia, dysarthria, dysphonia, and dysphagia), dry mouth, and clear sensorium Low fatality with good supportive care	CSF protein normal; EMG with repetitive nerve stimulation shows augmentation of muscle action potential; toxin assays of serum, feces, or gastric aspirate available through public health laboratory network. Specimens should be handled in a BSL Level-2 clinical lab	If botulism suspected call Local Health Department immediately. Standard precautions.	]-supportive care and passive immunization with botulism equine antitoxin (A, B, E) PEP-The use of antitoxin for exposure is limited. Current practice in outbreaks is to closely watch persons who may have been exposed to toxin and to treat promptly with antitoxin at the first sign of illness. Prevention-Heat food or drink to 85°C for 5 minutes; Vaccine-an investigational pentavalent (ABCDE) botulism toxoid is available from the CDC for high-risk lab workers and use in the military
Herpes simplex, post-infectious	**Venezuelan Equine Encephalitis Incubation period 2-6 days.** Encephalopathy with fever and seizures and/or focal neurologic deficits. Low fatality rate	Striking leukopenia and lymphopenia. CSF pleocytosis with predominately mononuclear cells; Virus can be isolated from serum and throat swabs; Cultures should be sent to a BSL Level-2 clinical lab Serological tests are available	Call Local Health Department. Standard precautions.	]-supportive A live attenuated vaccine (TC-83) is available on an investigational basis No PEP

Influenza-like Illness				
Numerous diseases, including Q Fever	**Brucellosis** Incubation period 5-60 days (average 1-2 months) Irregular fever, chills, malaise, headache, weight loss, profound weakness and fatigue. Arthralgias, sacroiliitis, paravertebral abscesses. Anorexia, nausea, vomiting, diarrhea, hepatosplenomegaly. May have cough and pleuritic chest pain Low fatality rate	Tiny, slow-growing, faintly-staining, gram-negative coccobacilli in blood or bone marrow culture(bone marrow has higher yield) . Cultures should be done in a BSL Level-2 clinical lab. Leukocyte count normal or low. Anemia, thrombocytopenia possible. CXR nonspecific: normal, bronchopneumonia, abscesses, single or miliary nodules, enlarged hilar nodes, effusions. A serum agglutination test is available. Additional serologic testing and culture available through public	Notify laboratory if brucellosis suspected—microbiological testing should be done in a biological safety cabinet to prevent lab-acquired infection. Call Local Health Department. Standard precautions.	]-doxycycline plus rifampin for 6 weeks; severe disease - streptomycin plus doxycycline for 4 weeks No vaccine PEP-doxycycline plus rifampin for 3 weeks
	Tularemia (Typhoidal, Pneumonic) **Incubation period 3-5 days (inhalation)** Fever, chills, rigors, headache, myalgias, coryza, sore throat initially; followed by weakness, anorexia, weight loss. Substernal discomfort, dry cough if pneumonic disease. Pulse-temperature dissociation in up to 40% of patients Moderate fatality if untreated	Health laboratory network. Small, faintly-staining, slow-growing, gram-negative coccobacillus in smears or cultures of sputum, blood. Routine culture is difficult. The organism grows best in a cysteine enriched media. Cultures should be done in a BSL Level-2 clinical lab. CXR may show infiltrate, hilar adenopathy, effusion. Definitive testing available through public health laboratory network.	Notify laboratory if tularemia suspected—microbiological testing should be done in a biological safety cabinet to prevent lab-acquired infection. Call Local Health Department. Standard precautions.	]-Streptomycin or gentamicin for 10 days. No vaccine PEP-doxycycline or ciprofloxacin for 14 days
Blistering Syndromes				
Mustard agents, Staphylococcal enterotoxin B	**T2 Mycotoxin** **Abrupt onset of mucocutaneous and airway irritation including skin (pain and blistering), eye (pain and tearing), gastrointestinal (bleeding, vomiting, and diarrhea), and airway (dyspnea and cough) within minutes** after exposure Moderate fatality with severe poisoning.	Consult with Local Health Department regarding specimen collection and diagnostic testing procedures.	Unlike other biological agents or biotoxins, trichothecene mycotoxins are dermally active and patients exposed should remove outer clothing and exposed skin should be decontaminated with soap and water. Eye exposure should be treated with copious saline irrigation. Standard precautions. Environmental decontamination requires use of a hypochlorite solution under alkaline conditions (1% sodium hypchlorite and 0.1 M NAOH) with a 1 hour contact time. Call Local Health Department for further instructions.	]-supportive, superactivated charcoal can absorb swallowed T-2, no antidote Prophylaxis-no vaccine, only defense is to wear protective clothing during an attack

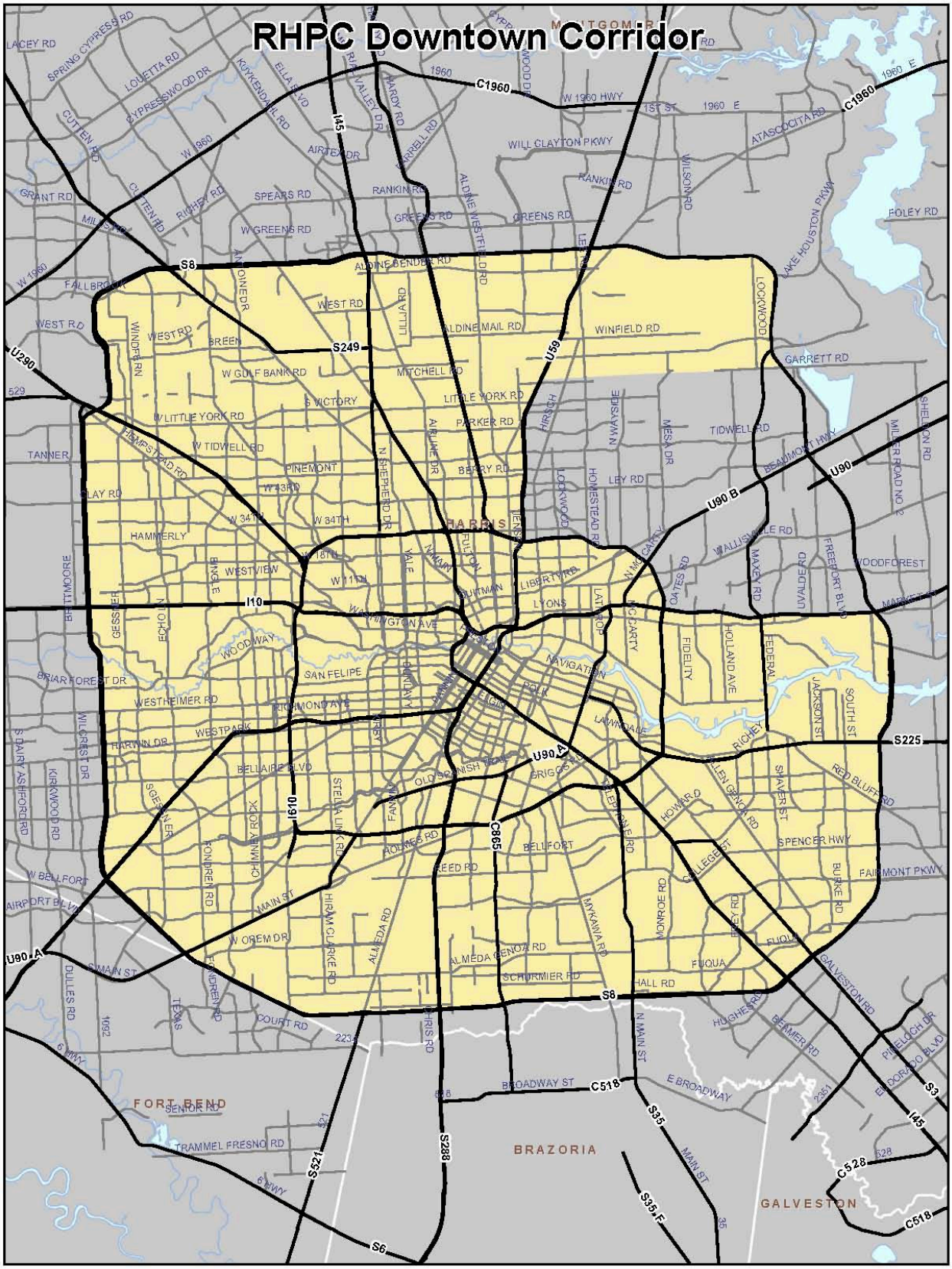
Treatment PEP-postexposure prophylaxis

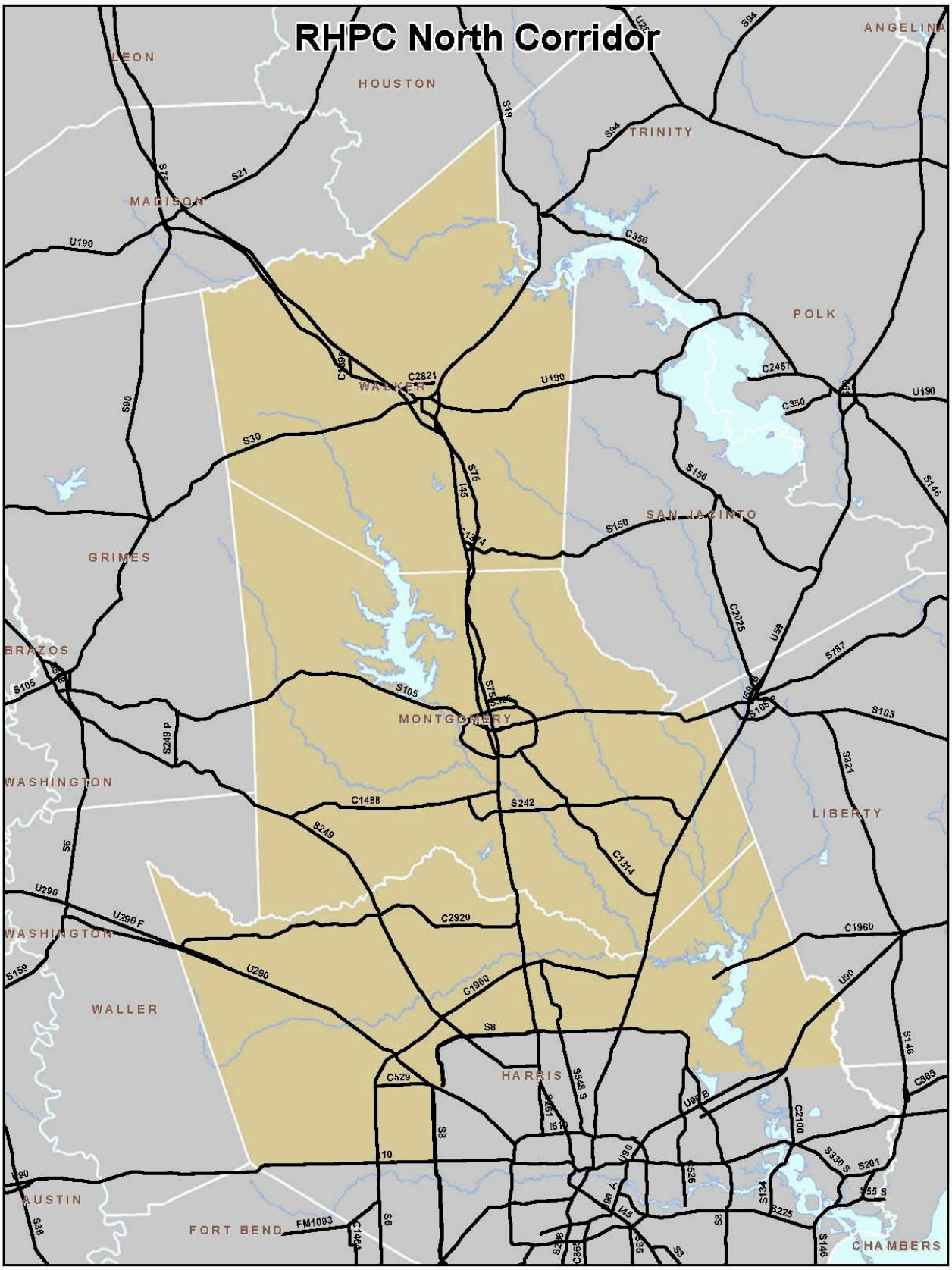
Medical Advisory Steering Committee to the Houston Task Force on Terrorism:
Chair: R. Feigin,MD, Members: W. Cassells,MD, R. Duke,MD, H. DuPont,MD, S. Greenberg,MD, C. Hamilton,MD, K. Mattox,MD, J. Mendelsohn,MD, E. Septimus,MD, J. Starke,MD, J. Willerson,MD Ex-officio member: D. Persse,MD

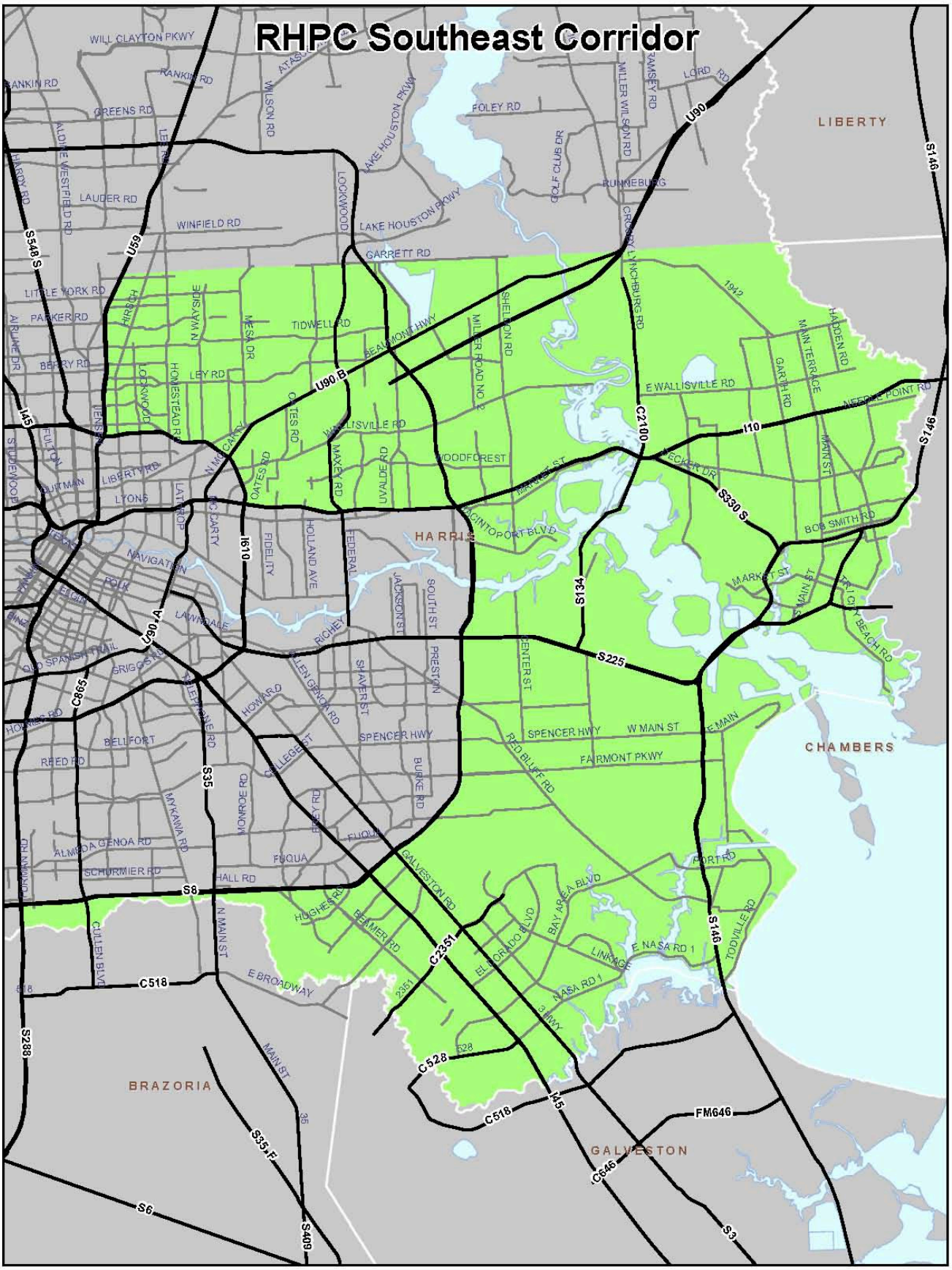
Negative Pressure Patient Rooms

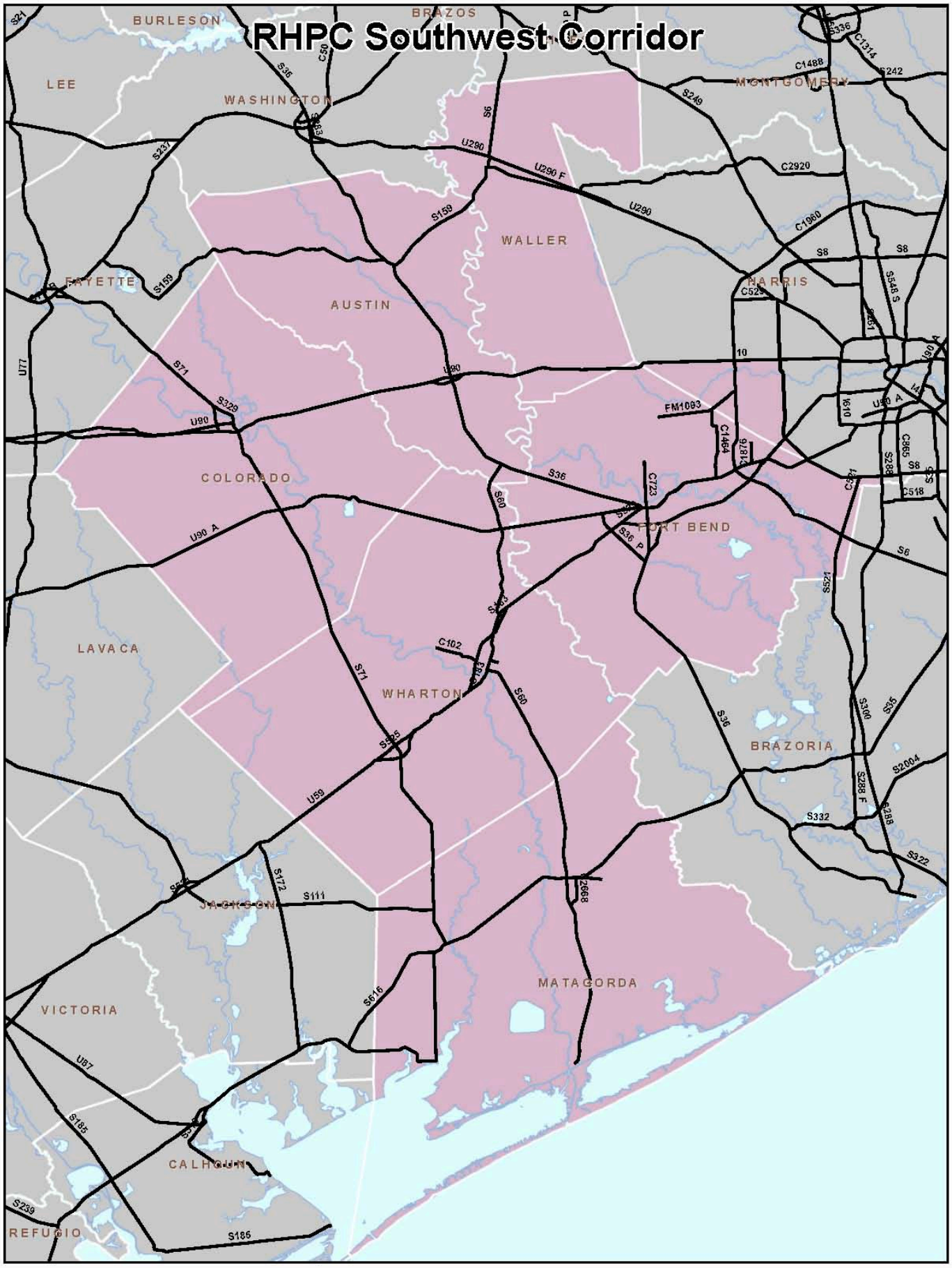
# Rooms	*Facility*	*# Rooms*	*Facility*

CORRIDOR DESIGNATIONS


RHPC Downtown Corridor
I45
I10
I610
U59
U90
U90 A
U90 B
U290
S8
S249
S225
S288
S6
S21
S35
S35 F
S3
C1960
C865
C518
C528
BARRIS
FORT BEND
BRAZORIA
GALVESTON
W 1960 HWY
1ST ST
WILL CLAYTON PKWY
ATASCOCITA RD
LAKE HOUSTON PKWY
FOLEY RD
GARRETT RD
WINFIELD RD
ALDINE MAIL RD
ALDINE BENDER RD
GREENS RD
RANKIN RD
SPEARS RD
W GREENS RD
FALLBROOK
WEST RD
W GULF BANK RD
MITCHELL RD
S VICTORY
W LITTLE YORK RD
LITTLE YORK RD
PARKER RD
W TIDWELL RD
TIDWELL RD
PINEMONT
BERRY RD
LEY RD
BEAUMONT HWY
MILLER RANCH RD NO 2
SHELDON RD
TANNER
CLAY RD
W 43RD
W 34TH
HAMMERLY
W 18TH
W 11TH
WESTVIEW
WASHINGTON AVE
LYONS
WOODFOREST
WALLISVILLE RD
UVALDE RD
FREEPORT BLVD
MAXEY RD
OATES RD
HOLLAND AVE
FEDERAL
FIDELITY
JACKSON ST
SOUTH ST
RICHEY
LAWNDALE
NAVIGATION
WOODWAY
SAN FELIPE
RICHMOND AVE
WESTHEIMER RD
WESTPARK
HARWIN DR
BRIARFOREST DR
BELLAIRE BLVD
S DAIRY ASHFORD RD
KIRKWOOD RD
WILCREST DR
GESSNER
CHOATE
BINGLE
BRITTMOORE
SAGEMEADOW
CHIMNEY ROCK
STELLA LINK RD
FANNIN
MAIN ST
OLD SPANISH TRAIL
GRIGGS RD
HOWARD
ELLEN GINOCHIO RD
SHAVER ST
RED BLUFF RD
SPENCER HWY
FAIRMONT PKWY
BURKE RD
COLLEGE ST
MONROE RD
MAYKAMA RD
ALAMEDA GENOA RD
ALAMEDA RD
HIRAM CLARKE RD
BELLFORT
REED RD
ACRES RD
W BELLFORT
AIRPORT BLVD
W OREM DR
SCHURMIER RD
HALL RD
FUQUA
HUGHES RD
BEAMER RD
GALVESTON RD
PEARLEAGH DR
EL DORADO BLVD
E BROADWAY
BROADWAY ST
N MAIN ST
MAIN ST
COURT RD
TRAMMEL FRESNO RD
SENDERO RD
DULLES RD
TEXAS
HOUSTON
HARRIS RD
6 HWY
1092
2234
2351
518
528
35


RHPC North Corridor
LEON
HOUSTON
ANGELINA
TRINITY
MADISON
POLK
WALKER
SAN JACINTO
GRIMES
BRAZOS
MONTGOMERY
WASHINGTON
LIBERTY
WALLER
HARRIS
AUSTIN
FORT BEND
CHAMBERS
S94
S19
S21
U190
C356
C2821
C2457
C350
S30
S90
S75
I45
S156
S146
S150
C2025
U59
S787
S105
S249 P
S249
C1488
S242
C1314
S6
U290
C2920
C1960
S159
S8
C529
S545 S
U90
C2100
S330 S
S201
S134
S225
S36
FM1093
C1464
S38
C365
S3
C355


RHPC Southeast Corridor
LIBERTY
CHAMBERS
HARRIS
BRAZORIA
GALVESTON
WILL CLAYTON PKWY
RANKIN RD
GREENS RD
ALDINE WESTFIELD RD
HARDY RD
LAUDER RD
WINFIELD RD
LITTLE YORK RD
PARKER RD
AIRLINE DR
BERRY RD
LOCKWOOD
HOMESTEAD RD
N WAYSIDE
MESA DR
TIDWELL RD
LEY RD
LAKE HOUSTON PKWY
GARRETT RD
BEAUMONT HWY
MILLER ROAD NO 2
SHELDON RD
FOLEY RD
GOLF CLUB DR
MILLER WILSON RD
RAMSEY RD
LORD RD
RUNNEBURG
CROSBY LYNCHBURG RD
1942
HADDEN RD
MAIN TERRACE
GARTH RD
E WALLISVILLE RD
NEEDLE POINT RD
MAIN ST
BECKER DR
BOB SMITH RD
MARKET ST
S MAIN ST
EL CLAY BEACH RD
W MAIN ST
E MAIN
SPENCER HWY
FAIRMONT PKWY
RED BLUFF RD
PORT RD
TODVILLE RD
BAY AREA BLVD
EL DORADO BLVD
LINRIDGE
E NASA RD 1
NASA RD 1
GALVESTON RD
HUGHES RD
BEAMER RD
FUQUA
HALL RD
SCHURMIER RD
ALMEDA GENOA RD
MYKAWA RD
MONROE RD
COLLEGE ST
BURKE RD
SHAVER ST
PRESTON
CENTER ST
SOUTH ST
JACKSON ST
RICHEY
HOWARD
ALLEN GENOA RD
TELEPHONE RD
BELLFORT
REED RD
HOUSTON RD
OLD SPANISH TRAIL
GRIGGS RD
LAWNDALE
NAVIGATION
POLK
FANNIN
ELGIN
BINGLE
STUDEWOOD
FULTON
HUTTMAN
LIBERTY RD
LYONS
LATHROP
N MACARTHY
OATES RD
MAXEY RD
UVALDE RD
WOODFOREST
MARKET ST
BOINTOPORT BLVD
FIDELITY
HOLLAND AVE
FEDERAL
CULLEN BLVD
N MAIN ST
E BROADWAY
MAIN ST
35
2351
C2351
C518
C528
C865
C2100
C646
FM646
I45
I10
I610
U90
U90 A
U90 B
U59
S548 S
S146
S225
S134
S330 S
S8
S35
S35 F
S288
S6
S460
S3


RHPC Southwest Corridor
BURLESON
BRAZOS
LEE
WASHINGTON
MONTGOMERY
WALLER
FAYETTE
AUSTIN
HARRIS
COLORADO
FORT BEND
LAVACA
WHARTON
BRAZORIA
JACKSON
MATAGORDA
VICTORIA
CALHOUN
REFUGIO

Catastrophic Regional Medical Operations Center
City of Houston Office of Emergency Management
TSA-Q