

Emergency preparedness and disaster management in Hawaii

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Abstract

The research is an administrative case study based on an extensive review of Hawaii government documents and interviews with key personnel of the Hawaii Emergency Preparedness Committee, civil defense and other relevant officials. Describes the interagency coordination at the federal, state, county, and community level to improve capability. Also described and critically evaluated are the roles of interagency emergency preparedness training, disaster drills, and coordination and partnership with the private sector, such as medical centers and the Federal Emergency Management Agency's designated "disaster resistant communities" in Maui and Hawaii County. Recommends that more frequent interagency drills, increased funding for family emergency preparedness and local community response teams, and continuous training by emergency response coordinators could improve state and county disaster preparedness and concludes that, overall, Hawaii is adequately prepared in emergency response capability, particularly in the areas of medical services and interagency coordination.

Oahu Civil Defense Agency (OCDA)

The Oahu Civil Defense Agency (OCDA) (see Appendix) is a department in the City and County of Honolulu. The Mayor acts as the CEO of OCDA. The Mayor also has the power to declare a disaster. Disasters are county specific. Each county (i.e. Honolulu, Maui, Kauai, and Hawaii) individually determines what constitutes a disaster. For example, the island of Hawaii may have volcano eruptions listed as a natural disaster, while Honolulu would not. Disaster descriptions can also be localized to certain areas within a county and designated to the Local Emergency Planning Committee (LEPC) (see Appendix) which is part of the City and County of Honolulu, as opposed to the State's Emergency Response Commission.

There are also federal requirements for each state to establish a community emergency response plan and the primary responsibility for compliance for the city of Honolulu is through the OCDA and their Emergency Operations Plan (Oahu Civil Defense Agency, 1997). For example, the Mayor must regularly report on the progress of various aspects of respective agencies such as the Environmental Protection Agency (EPA) (see Appendix) and Occupational Safety and Health (OSHA) (see Appendix). Both OSHA and EPA have regulations to help protect workers with hazardous waste and emergency operations. For example, Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) (see Appendix) requires each state to establish a State Emergency Response Commission (SERC) (see Appendix) that designates and coordinates the activities of the LEPC. The LEPC must develop a community emergency response plan (contingency plan) that contains emergency response methods and procedures to be followed by facility owners, police, hospitals, local emergency responders, and emergency medical personnel. The Environmental Protection Agency (EPA) generates these requirements and ensures that states implement emergency response planning programs. It should be noted that the State of Hawaii's Department of Labor and Industrial Relations is one of only 25 states to have an emergency response plan approved by OSHA.

All City departments follow the plans outlined in the City and County of Honolulu's Emergency Operations Plan. For example, the OCDA has revised the plans for the Hazardous Materials/Weapons of Mass Destruction section in their EOP since the May 1999 emergency preparedness drill at Aloha Stadium which involved serin gas. Once the Emergency Operations Plan draft is approved by the Mayor and City Council, all county departments and coordinating county agencies will follow suit accordingly. This was also the case

following the anti-terrorist training for emergency responders hosted by the OCDA in February 1998 at Kapiolani Community College, University of Hawaii. During this week-long training exercise the US Army soldiers and biological chemical command from Aberdeen Proving Ground, Maryland, working with OCDA, conducted training for Honolulu federal, state and local firefighters, law enforcement representatives, emergency medical technicians, hospital providers, and military responders. This specialized nuclear, chemical, biological training is designed to enhance emergency response for preventing and responding to terrorist events. Honolulu was the 12th city of the 120 US cities selected to receive this training (P. Takamiya, personal communication, August 7, 1999).

The OCDA facilitates communication, training, procedures, information, and responsibilities within the City and County of Honolulu and various private organizations; and also educates the public about emergency preparedness. Interviews with OCDA reveal that they are continuously reviewing, revising, and testing procedures outlined in the Emergency Operations Plan (P. Takamiya and W. Jones, personal communications, August 7, 1999).

The OCDA is located in the basement of the Honolulu Municipal Building where the Emergency Operating Center (EOC) (see Appendix) serves as the focal point for implementing the Emergency Operations Plan. The department has nine full-time employees and all employees are on-call 24 hours. The administrator of the OCDA works closely with the Mayor and acts as an advisor to the Mayor. The OCDA also has hundreds of volunteers.

The Emergency Operating Center is designed to coordinate emergency response including establishing operational policy, providing logistical and resource support, and communications. Specifically the EOC houses the communications system for the Emergency Broadcast System and a meeting area for the City and County of Honolulu's Disaster Committee to meet. This meeting room has televisions to monitor the local network stations, a communications system equipped with a device to monitor the radio stations, and a large map of the island of Oahu. During a real disaster or training exercise, the City and County's Disaster Committee gathers on a rectangular table equipped with a telephone for each seat. The Mayor sits on one end of the table, and the OCDA Administrator on the other. Other representatives from various City and County of Honolulu departments occupy the rest of the table (e.g. fire, police, public works, etc.). The EOC also houses the communications and radio devices for EMS, hospitals, police, fire, utility companies, and federal, state, and other county agencies.

Various members of the disaster committee at the EOC regularly coordinate their disaster preparedness activities with assistance from federal programs such as the Community Emergency Response Team (CERT) (see Appendix) of the Federal Emergency Management Agency (1999) (FEMA) (see Appendix). For example, the Operations Manager of the Kaiser Permanente Medical Center on Oahu, plays a vital role at the EOC, is a member of the disaster committee as well as a certified trainer of CERT. As a CERT approved trainer, he regularly coordinates and provides training to "teams" of 12-15 Hawaii representatives of various community associations, organizations, and neighborhood boards. The classes are one evening a week for seven weeks and cover various CERT standardized "sessions" in disaster preparedness, disaster medical operations, light search and rescue operations, and disaster simulation (K.J. Clark, personal communication, September 22, 1999, and P. Takamiya, personal communication, September 24, 1999).

Hawaii's coordination with FEMA through CERT and Project Impact

FEMA, recognizing the importance of preparing citizens for a wide range of potential disasters, expanded the CERT materials from primarily fire to medical and eventually all hazards, natural and man-made (see Table I).

FEMA supports CERT by conducting or sponsoring Train-the-Trainer sessions (TTT) (see Appendix) for members of the fire, medical, and emergency management community. The objectives of the TTT are to prepare attendees to promote this training in their community, conduct TTTs at their location, conduct training sessions for neighborhood, business and industry, and government groups, and organize teams with which first responders can interface following a major disaster. FEMA believes that the CERT course will benefit any citizen who takes it. This individual will be better prepared to respond to and cope with the aftermath of a disaster. Additionally, if a community wants to supplement its response capability after a disaster, civilians can be recruited and trained as neighborhood, business, and government teams that, in essence, will be auxiliary responders. These groups can provide immediate assistance to victims in their area, organize spontaneous volunteers who have not had the training, and collect disaster intelligence that will assist professional responders with prioritization and allocation of resources following a disaster. According to the OCDA Operations and Planning Director, seven teams of Hawaii residents have participated in the various CERT training sessions since 1997. More importantly, neighborhoods which have CERT trained teams have not only been made more aware of how to respond to disasters but have been more effective and efficient in their response to actual emergencies (P. Takamiya, personal communication, September 24, 1999).

FEMA staff maintains that in Hawaii, as in other states which participate, CERT assists communities and people to help other people through readiness, rescuer, safety, and doing the greatest good for the greatest number. Recipients of training and assistance in Hawaii see CERT as a positive and realistic approach to emergency and disaster situations where residents are initially on their own and their actions can make a difference. Through training, CERT assists residents of Hawaii to manage utilities, put out small fires, control bleeding, treat for shock, provide basic medical aid, search for and rescue victims safely, and organize themselves and spontaneous volunteers to be effective (K. Clark and OCDA staff, personal communication, September 22, 1999; T. Clairmont, personal communication, September 26, 1999).

Hawaii also coordinates its activities with FEMA through Project Impact, a national initiative dedicated to reducing the effects of natural disasters. This national effort aims to assist communities become proactive in their response to natural disasters by assessing their vulnerabilities and implement strategies before disasters occur. Communities which actively participate in the project are provided assistance to develop strategies to become more disaster resistant. The overall strategy involves coordination and a local partnership of government and business to reduce human and financial cost of disasters. In Hawaii, the County of Maui and Hawaii County, were selected by FEMA's Project Impact and are part of a growing list of specially designated "disaster resistant communities." As a result FEMA has provided Maui County with \$300,000 in grants and Hawaii County with \$500,000 (K. Clark, personal communication, September 22, 1999; P. Takamiya, personal communication, September 24, 1999).

The Emergency Preparedness Committee

The Emergency Preparedness Committee (EPC) (see Appendix) of the Healthcare Association of Hawaii is responsible for providing hospital services in support of the state civil defense system as cited in Hawaii's Disaster Relief Act (Hawaii Revised Statutes, Chapter 127) and various federal, state, and county emergency response plans. The Chair of the EPC is appointed by the Chief Executive Officer (CEO) of HAH (see Appendix). Members are appointed by their respective health care organization CEOs. Membership includes representatives of all hospitals in the state of Hawaii including Tripler Army Medical Center, the Blood Bank of Hawaii, State and County Civil Defenses, State and County Departments of Health, US Department of Defense, and various nongovernmental organizations, such as the American Red Cross and others. The HAH

and the EPC coordinates information with the various federal, state, and county departments through the EPC which has most key state and county agencies in its membership. Representatives of the EPC also sit on various state and county working groups, task forces, and exercise development teams. The interaction is both formal and informal. The annual goals and objectives of the EPC are determined by requests of the HAH Board of Directors; requests of various county and state agencies; outcomes of previous year exercises (sub-optimal performance); and development needs of EPC membership.

The procedures for responding to an emergency that will affect large numbers of the population (e.g. hurricanes, weapons of mass destruction, etc.) are outlined in the Hospital Services Coordinating Plan (HSCP) (see Appendix) which describes how hospital services are to be provided during an emergency or disaster. This plan includes a number of emergency operating procedures. The HSCP also outlines procedures for responding to an emergency on a smaller scale; and defines operational response into three levels beginning with routine daily operations (level 0). The HSCP also details which hospital people are taken to in the course of an emergency.

The EPC also coordinates at least one large-scale statewide exercise each year. These exercises are carefully planned, executed in close coordination with federal, state, county, and private agencies, and evaluated. Although the annual statewide EPC exercise is the major training activity of each year's schedule, the EPC also participates in a number (average of two to three) of smaller interorganizational coordinated exercises hosted by other agencies.

The Honolulu based EPC is unique in the nation. Its strength is the ability to bring all key stakeholders involved in health care emergency response into one, well-aligned, and well-coordinated system. Improvement opportunities include the need to further incorporate non-hospital organizations into the network more effectively, and improve the professional development of hospital emergency coordinators. For example, a key player with EPC is Toby Clairmont, vice-president of Kaiser Permanente Medical Center in the state of Hawaii. During "peacetime" he chairs the EPC, and during "wartime" when an emergency threatens or has occurred, he serves as the special staff officer for the Honolulu EOC coordinating all hospitals in the state of Hawaii. According to Vice-President Clairmont, who has worked over 250 emergencies in the last 25 years, ranging from multi-family structural fires to hurricanes, three critical factors in successfully responding emergencies are:

- (1) family emergency preparedness;
- (2) local community emergency response teams; and
- (3) well-trained organizational coordinators (T. Clairmont, personal communication, September 26, 1999).

The Emergency Medical Services Division

In Hawaii, the statewide responsibility for emergency medical services rests with the State Department of Emergency Services (SDES). Annually, the State Department of Health (SDOH) (see Appendix) contracts with the City and County of Honolulu to provide pre-hospital emergency medical care and emergency ambulance services on the island of Oahu. The Emergency Medical Services (EMS) Division is headed by a Chief of EMS with two Assistant Chiefs: one for Operations and one for Quality Assurance. The Division has two Districts with two EMS Field Operations Supervisors overseeing each District. Operations of individual ambulance units are directed by a Unit Supervisor.

There are a total of 16 ambulance units under the two districts. All ambulance units are designated as Advanced Life Support (ALS) (see Appendix) units. The ALS ambulances are staffed with at least one

Mobile Intensive Care Technician (MICT, also known as a Paramedic) (see Appendix), trained and authorized to perform invasive techniques under off-line medical control and standing orders. A second MICT or Emergency Medical Technician (EMT) constitutes the other crewmembers. The EMS Communications Center dispatches ambulances to hospitals and maintains personnel schedules. In 1995, EMS Emergency Medical Dispatchers answered 48,201 E911 calls, an average of 132 calls per day (Department of Business, Economic Development & Tourism, Research and Economic Analysis Division, 1996). Further coordinating and cooperative organizations include: the 68th Medical Detachment of the US Army which is an integral link in the Oahu EMS system. Military Assistance to Safety and Traffic (MAST) (see Appendix) provides six Blackhawk UH-60 helicopters, enabling evacuation of patients in critical condition from rural areas of Oahu to hospitals affording specialized care. Medical care *en route* is provided by a City and County of Honolulu MICT and an army medic. Moreover, the Honolulu Fire Department provides co-response with personnel trained to the first responder level and has an automated defibrillator program. It should be noted that in September 1999, during a routine training session for officers of the Honolulu Police Department in the use of the defibrillator, the Chief of Police who was attending the session and demonstrations collapsed suffering from a heart seizure. Honolulu Police Department trainees were sufficiently skilled in use of the defibrillator to revive the Police Chief and keep him stable until the EMS Paramedics arrived to provide emergency medical care and take him to QMC where he eventually recovered. Consequently, the automated defibrillator program EMS training for the Honolulu Police Department was determined to be instrumental in saving the Chiefs life. In addition to fire suppression, the Honolulu Fire Department coordinates hazardous materials (HAZMAT) incident responses, search and rescue, and vehicle extrication. Sea rescues are coordinated between the US Coast Guard, Honolulu Fire Department, and the ambulance service.

The employees of the City and County of Honolulu, Department of Emergency Services respond to all 911 calls for EMS on the island of Oahu ... 42,763 times in 1995. Over 800,000 people live on the island of Oahu. This constitutes nearly three-quarters of the states' population of 1,108,205. Oahu is also visited by most of the 6 million tourists who come to Hawaii every year. Since EMS serves not just Honolulu but the entire island of Oahu, this ranks the EMS services as 11th in the nation based on population served (Department of Business, Economic Development & Tourism, Research and Economic Analysis Division, 1996; Cady and Mayfield, 1996).

Role of medical centers

With 560 beds, the Queen's Medical Center (QMC) is the largest voluntary hospital and main trauma center in Hawaii. Founded in 1859 by Hawaiian royalty, it offers a comprehensive range of primary and specialized care services and plays a major role in the overall response to natural disasters and other emergencies in the state of Hawaii. QMC currently has over 1,000 physicians on its staff, a total of 3,500 employees, and an annual budget approaching 81 billion (The Queen's Medical Center, 1999). QMC's trauma facility has been verified as a level two trauma center by the Committee on Trauma of the American College of Surgeons, the national accrediting agency for trauma services (Griffith and Oshiro, 1999).

As a level two trauma center, certain essential services must be made available to the public. These include:

- twenty-four hour immediate coverage by general surgeons and specialists in orthopedic and neurosurgery, anesthesiology, emergency medicine, radiology, and critical care;
- tertiary care needs such as cardiac surgery, hemodialysis, and microvascular surgery may be referred to a level one trauma center;
- an ongoing commitment to trauma prevention and to the continuing education of trauma team members; and
- continuous efforts to improve the quality and effectiveness of trauma care through a comprehensive quality assessment program (QMC, 1998b).

As the largest medical center specializing in trauma services, QMC plays a vital role as a member of the Emergency Preparedness Committee (EPC) of the umbrella Healthcare Association of Hawaii (HAH). The EPC meets regularly to discuss emergency management procedures, and consists of representatives from each of the member hospitals, including Tripler Army Medical Center, a comprehensive care military hospital located on the island of Oahu.

At the hospital level, QMC has its own Emergency Preparedness Committee which is responsible for developing and maintaining a system of emergency codes (see Table II). When the appropriate code is activated (i.e. when an actual disaster or emergency has already occurred), a command center is created and headed by the Administrative Disaster Officer at the medical center. When an event occurs, QMC focuses primarily on:

- the number and types of victims coming into the hospital;
- internal problems at the hospital, including the possibility of risk through damage, contamination, etc.;
- optimizing patient outcomes; and
- assessing and improving risk management for similar incidents in the future.

This process is illustrated in Figure 1.

Emergency preparedness training

QMC has developed a comprehensive *Emergency Safety Manual* which contains detailed procedures for every unit of the hospital and for each kind of emergency. When hired, every employee receives 16 hours of uniform emergency preparedness training and additional specialized training based on the unit assigned to. In order to ensure that there will be continuous training review, in November 1998, the QMC's Emergency Preparedness Committee (actually a subcommittee of the QMC Safety Committee) recommended that three new subcommittees be created to increase every employee's understanding of emergency preparedness as it continually evolves at the medical center. The subcommittees were formed and focused on constant review and updating of the QMC *Emergency Preparedness Manual*.; planning and participating in hospital and island-wide disaster drills; and emergency response evaluation and critique (manual subcommittee, internal memorandum, 1998).

At the present time, employees must respond to a monthly hospital-wide drill which uses a randomly selected emergency code (see Table II). The results of the drills are reviewed by all three subcommittees and incorporated into the emergency preparedness recommendations they make to the Board of Trustees.

Recent emergencies on Oahu

Internal hospital accidents are handled routinely and efficiently, according to QMC's Security Director. Incidents originating outside the medical center are more worrisome to hospital staff. Over the past two years, there have been five major external emergencies that have had an impact on QMC. These included:

- pepper spray released on a commercial airliner in 1998, resulting in 20 patients treated by the hospital;
- acute back injuries caused by extreme turbulence aboard a commercial jet;
- an anthrax scare resulting in eight possibly contaminated patients being transported to QMC from downtown Honolulu (this turned out to be a hoax); and

- an avalanche at Sacred Falls State Park on the island of Oahu (G. Dias, personal communication, August 27, 1999).

With regard to the avalanche, boulders and other debris from an area the size of a football field dropped 500 feet from a cliff onto tourists who were swimming next to a waterfall directly below. As the emergency call went out from the park, firefighters, paramedics, and civilian volunteers risked their lives pulling bodies out of the rubble and providing first aid to the victims. According to reporters (Tighe and Ohira, 1999), the survivors “had missing arms, missing legs, holes through their bodies, exposed abdominal cavities and other injuries. Some of the dead were flattened under boulders the size of cars.” Fortunately, a medical doctor visiting from California was one of the first at the scene and began triaging and providing emergency aid to the survivors until the paramedics arrived. Most of the critically injured victims were airlifted to QMC, while the less seriously injured went by ambulance to other regional hospitals on Oahu. According to Tighe and Ohira, although firefighters and paramedics arrived at the park entrance within several minutes from the time a park employee called 911, it took them a total of 20 minutes to reach the site of the disaster from the time they were dispatched.

The delay in time was mainly because of the remoteness of the site from the park entrance.

In the end, there were six fatalities, 13 seriously or critically injured victims, and dozens of minor injuries (Tighe and Ohira, 1999). Seven of the most seriously injured went to QMC. According to Gary Dias, QMC’s Security Director, the trauma center was prepared for the victims, and patients received treatment as soon as they arrived. Internally, the hospital’s Emergency Preparedness Plan was activated and everything went as planned (G. Dias, personal communication, August 27, 1999).

From an overall assessment by the authors, the major factors contributing to QMC’s excellent track record when handling emergencies can be identified as:

- continuous evaluation and improvement of the *Emergency Preparedness Safety Manual*;
- the high priority QMC places on continuous disaster preparedness training for all of its employees;
- competency of staff, and especially the Trauma Services Unit;
- the highly effective coordination QMC has developed with outside agencies.

Coordinating and cooperating with outside agencies

It has been proposed that emergency management is both proactive and reactive and this realization applies to QMC in its efforts to coordinate with outside agencies (Sensenig, 1999). The primary means by which QMC achieves its coordination is through the Healthcare Association of Hawaii.

The Healthcare Association of Hawaii

The Healthcare Association of Hawaii (HAH) is a non-profit organization representing the state of Hawaii’s acute care hospitals and two-thirds of the long-term care beds with a total of 41 facilities. HAH also represents community based providers and many supporting organizations which provide services and supplies to the industry. This includes the HAH Emergency Preparedness Committee (EPC), which coordinated “Island Crisis”, a full-scale chemical terrorism response drill in May 1999. Fourteen hospitals participated and five of these facilities demonstrated their ability to provide emergency casualty decontamination. HAH includes among its affiliate members other organizations which support coordination in emergency response efforts such as Hawaii Air Ambulance and International Life Support, Inc. Moreover, a World Wide Web site was developed by the Emergency Preparedness Program (EPP) of the HAH. It is designed to provide information and data management services to health care facility emergency managers in the state of Hawaii. The EPP is coordinated with the City and County of Honolulu, Oahu Civil Defense

Agency (OCDA), and utilizes the HAH's Emergency Operations Network ([http:// www.hah-emergency.net](http://www.hah-emergency.net)). Other recommended emergency management Web sites that are linked to the HAH system are shown in Table III. In addition to the HAH Emergency Operations Network, communication and coordination is facilitated through HAH members and affiliates involved in the Oahu Emergency Communications Packet Network. These organizations include the American Red Cross, Hawaii State Civil Defense, OCDA, and hotels which are also members of Honolulu's disaster committee at the City and County of Honolulu's Emergency Operations Center (EOC). Other organizations in the Network are Kaiser Medical Center, Kuakini Medical Center, St Francis Medical Center, Queen's Medical Center, and the Blood Bank of Hawaii. It should be noted that the Blood Bank of Hawaii plays a vital role and designates 10 per cent of all donated blood to disaster victims suffering from trauma. Each of these organizations is in the process of trying to develop an effective Oahu Emergency Communications Packet with an appropriate distribution system. The ultimate goal of the Oahu Emergency Communications Packet System is to interface with the Internet to send and deliver outbound messages in a timely, unattended fashion and to overcome problems of congestion, intervention, and limited capacity.

Conclusions and recommendations

Based on the extensive amount of research undertaken, the authors recommend, that:

- State and county preparedness could be improved with more frequent interagency disaster drills.
- Improvements by state and agencies could also be made with an increased focus and funding for family emergency preparedness, local community response teams, and increased continuous training of emergency response coordinators.
- Improvement could also be made in the area of OCDA sponsored drills. Based on the results of the various interviews with agency personnel, some glitches still exist in the siren/alarm drill held each month for Oahu. Apparently, some parts of the alert system network are not always instantaneously connected as they should be. While the yearly drills and actual disaster simulation response are usually carried out very well, improvements could be made by having the key players take their designated places in the Emergency Operating Center. Apparently some of the key players have been attending as observers and not participants.

Overall, it appears that Hawaii is adequately prepared in emergency response capability, particularly in the areas of medical services and interagency coordination. The ultimate test, however, will be the ability of Oahu's network of governmental, non-profit and private organizations to effectively respond to a major disaster of the scope of hurricane Iniki which hit the island of Kauai in 1992.

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Appendix. Glossary of terms

ALS *Advanced Life Support* - Ambulance units within the Districts of the Emergency Medical Services Division.

CERT *Community Emergency Response Team* - Federal program which provides assistance to communities in disaster preparedness.

EMS *Emergency Medical Services* - A division within the City and County of Honolulu which provides pre-hospital emergency medical care and emergency ambulance services on the island of Oahu. Also a first responder in life saving services (with HPD and HFD).

EOC *Emergency Operating Center* - Designed to coordinate emergency response including establishing operational policy, providing logistical and resource support, communications, etc.

EOP *Emergency Operations Plan* - The community emergency response plan established in compliance with federal regulations.

EPA *Environmental Protection Agency* - Federal agency with overall responsibility for regulation and enforcement of federal environmental laws and statutes designed to protect the environment.

EPC *Emergency Preparedness Committee* — The Emergency Preparedness Committee of the Healthcare Association of Hawaii is responsible for providing hospital services in support of the state civil defense system as cited in Chapter 127, HRS, Disaster Relief Act and various county, state, and federal emergency response plans.

EPP *The Healthcare Association of Hawaii's Emergency Preparedness Plan* - For coordination of inter-hospital emergency response.

HAH *Healthcare Association of Hawaii* - Coordinates emergency response planning and implementation among Oahu hospitals.

HFD *Honolulu Fire Department* - Responsible for fire suppression and coordinates hazard materials incident responses, rescue extraction, first responder life saving services (shared with EMS and HPD).

HPD *Honolulu Police Department* - Responsible for crowd and traffic control, and first responder in life saving services (with EMS and HFD).

HSCP *Hospital Services Coordinating Plan* - Outlines how hospital services are provided during an emergency. This plan includes a number of emergency operating procedures.

LEPC *Local Emergency Planning Committee* - Representatives of the various City and County agencies responsible for developing emergency response plans.

MAST *Military Assistance to Safety and Traffic* - Military funded program that provides Blackhawk UH-60 rescue helicopters for the extraction of victims to Oahu hospitals.

MICT *Mobil Intensive Care Technician* - Paramedics trained and authorized to perform invasive life saving techniques.

OCDA *Oahu Civil Defense Agency* - Honolulu City and County agency which assists in developing a community based emergency response plan.

OSHA *Occupational Safety and Health Agency* - Federal agency which regulates and enforces health and safety laws designed to protect the health and safety of workers.

SARA *Superfund Amendments and Reauthorization Act of 1986 (Title III)* Requires each state to establish a state commission and a community emergency response plan.

SDEMS *State Department of Emergency Service* - Has state-wide responsibility to coordinate emergency medical services, including the dispatching of ambulances to hospitals.

SDOH *(Hawaii) State Department of Health* Contracts with the City of Honolulu to provide pre-hospital emergency medical care, including ambulance services to the island of Oahu.

SERC *State Emergency Response Committee* Representatives of the various state departments which designate and coordinate the function of those responsible for emergency response.

TTT *Train-the-Trainer* - Sessions provided by CERT to certify representatives of various community associations and organizations in relevant aspects and skills of disaster preparedness. Once certified these trainees then train other members of their respective organizations.