

## **F. Summary of Major Recommendations**

- 1. The Emergency Medical Services Division should add a 3 pm to 11 pm shift to the Makakilo unit and add two new units during the peak periods to the metropolitan Honolulu area bounded by Wailupe on the east and Waipahu on the west.**

The five units that currently serve this area during the day and evening shifts are so busy that their response times too often fail to meet the clinical threshold for resuscitation.

- 2. The Honolulu Fire Department should implement a first responder automatic defibrillation program for each fire station where statistics show that the first response units usually arrive on location prior to the advanced life support (ALS) ambulance. The remaining fire stations should be added to the project in phases over the next three years.**

The American Heart Association (AHA) recommends that every first response fire apparatus in the country be staffed and equipped to provide automatic defibrillation to cardiac arrest patients. If cardio-pulmonary resuscitation (CPR) is initiated and an electric shock delivered to a patient in cardiac arrest within five minutes, the chances of recovery are about 50/50. The chance of recovery declines about 5 percent for each minute that defibrillation is delayed.

This initiative will require a change in state law to permit first responders to use the automated external defibrillators.

- 3. The Emergency Medical Services Division should immediately implement the Medical Priority Dispatch System.**

The Medical Priority Dispatch System (MPDS) improves the quality of the information which the dispatcher elicits from the caller, provides a systematic means of dispatching the correct type of equipment for the particular needs of the patient and provides pre-arrival instructions that the caller can use to begin life-saving treatment before the ambulance arrives.

**4. The Emergency Medical Services Division should install a Computer-Aided Dispatch (CAD) System.**

A CAD system that integrates with the city's enhanced 9-1-1 (E911) system, the MPDS software and the SDOH computer system, should be installed to ensure that the patient receives the closest available unit and to more efficiently monitor the ongoing status of the system. The system should be implemented in phases to ultimately include automatic vehicle locating (AVL) information and mobile data terminals installed in each ambulance.

**5. The Emergency Medical Services Division should proceed with the reorganization previously approved for the Division and conduct management training for the new managers.**

The EMS Division has been seriously understaffed from a management point of view. This has led to poor morale, an inability to properly monitor the system and a situation where the primary management function is to react to crises instead of plan for future needs.

The City should then contract with a firm to assist the new managers in assessing the types of management techniques that will most likely result in the improvements that the organization needs. The assessment must be followed up with manager training on how to implement the program. Merely adding additional managers will not suffice unless they have the *management* skills to successfully lead employees through the period of change that they are facing.

**6. The Emergency Medical Services Division should computerize the following functions:**

**a. Employee Scheduling**

Currently, employee scheduling is done manually. When changing monthly schedules, the contract with the United Public Workers (UPW) union requires specific, highly complex, criteria to be followed. The use of a manual scheduling system has resulted in these rules not being followed and, consequently, in a significant amount of overtime being charged. Computerization of the scheduling system, which would take into account all the union requirements, would pay for itself in a matter of months.

**b. Vehicle Maintenance**

Ambulances have to be cared for meticulously. If an ambulance breaks down at the wrong time, it can have devastating effects on patient care. An analysis of the current vehicle maintenance contract with GTE found that many ambulances were having the same parts replaced on consecutive repairs, and that preventive maintenance was falling behind schedule. The computerized vehicle maintenance system is not set up to identify these problems with parts or scheduling.

**c. Patient Care Information**

The State of Hawaii Department of Health currently collects all ambulance run reports from the City and enters them into a computer, a process that takes anywhere from nine to 12 months to accomplish. For the City to more efficiently monitor patient care, they need the ability to review this information on a weekly basis. We recommend that the EMSD take over data entry into their own computer for their own use and upload the information directly to the State, which can then use it for its quality assurance needs and system planning needs.

- 7. The Emergency Medical Services Division should work with its employees and the UPW to change the work schedule from three eight-hour shifts per day to a combination of 12-hour shifts for the busy units and 24-hour shifts for the country units. Furthermore, individuals should be regularly rotated between busy stations and less busy stations.**

The current uniform work schedule of three eight-hour shifts with individuals working the same shift at the same station for a year at a time is an inefficient use of staffing and can result in skill deterioration among the employees that work the slowest shifts at the slowest stations. With the recommended scheduling the EMSD can staff more units with the same number of people. More importantly, it gives the EMTs and MICTs the opportunity to care for a wider variety of patients so that they can maintain their skills.

- 8. The Emergency Medical Services Division should seek to have its contract with the State amended to allow the use of peak-load staffing.**

Currently, the State contract designates the areas to be served, the number of ambulances to be stationed in each area and the hours of operation of each ambulance. Under the peak-load staffing concept, the State would require that the City provide sufficient units during any time of the day or night to ensure that the public would have an ambulance within a certain response time, e.g. less than eight minutes 90 percent of the time. The EMSD would have the flexibility to add, delete or move units during peak hours, days and months, increasing the efficient use of resources.

9. **The City and County of Honolulu, in conjunction with the UPW, should seek to have the Emergency Medical Services Division employees included in the police, fire and correctional officer retirement plan that provides for full retirement after 25 years of service.**

EMS workers are as stressed and require at least the same level of physical fitness as do police, fire and correctional workers. A "25 and out" retirement plan will minimize the city's exposure to the increasing risk of permanently disabling on-the-job injuries.

10. **The City should petition the State Board of Medical Examiners to bring the training and certification requirements for the Emergency Medical Technician (EMT) into compliance with the national voluntary standard *ASTM F-1031, Standard Practice for Training the Emergency Medical Technician (Basic)*.**

The State of Hawaii currently requires EMTs to take a course of training which is almost three times longer than the standard used by virtually every other state. This presents a significant barrier to entry into the EMS field and has contributed to the personnel shortage which exists in the state. Consequently, it has unnecessarily driven up the cost to the state of providing EMS.

11. **The City and County of Honolulu should encourage the State Department of Health to increase the fees charged for EMS to fund the cost of upgrading the Oahu EMS System.**

The State of Hawaii has the responsibility to pay for emergency medical services in the state as well as the authority to collect fees for providing these services. The current fee is approximately one-third of the market rate for the level of service needed in Hawaii. The fee should generate enough new revenue to finance the cost of implementing the recommendations in this report.

12. **The City and County of Honolulu should accord the EMS Division at least the same priority in attention to its needs as the is accorded to the "waste" collection function.**

During the site visit, the audit team learned that the ambulances used to be maintained in the Automotive Equipment Services Division central shop. There was a problem, however, in that the garbage trucks were considered a higher priority for repair than the ambulances. Consequently, the EMSD is still looking for reliable and timely maintenance for their fleet.

In the reply to the preliminary report, the Data Systems Division reported that Wastewater Maintenance would be the first city function to experiment with in-field computing and that EMSD would have to wait until the results of that, and HPD's 1995 installation of mobile data terminals is complete before they would be considered for in-field computing.

There is no other function performed by the government of the City and County of Honolulu which directly impacts on the health and safety of its citizens and visitors as much as the Emergency Medical Services Division. The problems that the Division has experienced are as much related to the low priority the Division receives from the municipal government as they are to the State's inadequate funding. If the CCH placed a higher priority on providing quality EMS then they would be more successful at acquiring the necessary funding from the Governor and Legislature.