CITY OF OAKLAND

AGENDA REPORT

TO: Office of the City Administrator
ATTN: Dan Lindheim
FROM: Gerald A. Simon, Fire Chief
DATE: September 15, 2009

RE: **Report on the Proposal to Use the Lucas Chest Compression System on Select Medical Calls for a Trial Period Beginning September 16, 2009 and Ending No Later Than September 15, 2010 or When the Device Has Been Used on 50 Patients**

SUMMARY

The City of Oakland Fire Department (OFD) provides Advanced Life Support (ALS) services to the Oakland community. This includes performing Cardio-Pulmonary Resuscitation (CPR) on cardiac patients. The American Heart Association's guidelines for cardiac resuscitation place heavy reliance on good, effective CPR that is fast and hard with few interruptions. The Lucas Chest Compression system is a CPR device that performs external cardiac compressions on non-trauma adult patients whose hearts have stopped beating and they are no longer breathing due to a primary medical condition. Staff is providing information on a proposal by product manufacturer Jolife to loan the Oakland Fire Department seven Lucas Chest Compressions System devices. OFD will receive the devices from the distributor Physio-Control/Medtronic's. The devices will be used and evaluated for a one year period or until they have been used on 50 patients. If after the evaluation period, the Fire Department determines that the product has significantly improved the care of full-arrest patients, then staff will pursue grant funding for the purchase and implementation of the Lucas Chest Compression system for use throughout the City of Oakland.

FISCAL IMPACT

There is no fiscal impact to the General Fund associated with this request. During the evaluation period all costs associated with maintenance or supplies will be covered by Physio-Control/Medtronic's. There are no additional risks The Fire Department assumes liability for any damage or theft to the units. At the conclusion of the evaluation period if the product is recommended for purchase, staff will pursue non-General Fund or grant funding to cover the purchase price, which is estimated to be $505,024.00 for the purchase of 32 units and back up regulators with a two (2) year extended service plan.

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September 15, 2009

BACKGROUND

The Lucas Chest Compression System has been widely used in Europe since 2002. The Federal Drug Administration (FDA) recently approved its use in the United States. There is no added liability to the City of Oakland during the testing period. Local EMS teams who are utilizing the device include the Hayward Fire Department, San Jose Fire Department and the Contra Costa County Fire Department.

KEY ISSUES AND IMPACTS

Effective chest compressions are essential for providing good blood flow during CPR. These compressions deliver vital oxygen to the brain and can prime the heart for a successful shock. The likelihood of return of spontaneous circulation (ROSC) is significantly improved when sufficient coronary perfusion pressure during cardiac arrest is maintained. Several studies show the effectiveness of chest compressions can drop rapidly due to rescuer fatigue.

The Lucas Chest Compression System is manufactured by Jolife and distributed by Physio-Control/Medtronic's. The device automates external chest compressions from the first response in the field (Fire Department), during ambulance transport and until patient is stabilized at the hospital. The device facilitates consistent blood flow from the moment use begins. Further, there is a reduction in the number of patient injuries caused by the force of hand compressions.

Oakland Fire Department staff has been fully trained to operate and maintain the device. The device was included as part of a recent CPR module for all EMT's and Paramedics in the department.

PROGRAM DESCRIPTION

The Lucas Chest Compression System allows rescuers to initiate hands-free compressions. Using an automated compression device such as the Lucas allows responders to stabilize a patient and quickly control the emergency scene. The Oakland Fire Department will be loaned seven Lucas Chest Compression System devices for use and evaluation until the device has been used on approximately 50 patients. The devices will be placed on engines throughout the City.

Placement of the devices was determined based on historical data that identified the highest incidents of medical cardiac arrest patients by Council District, so that there is one device at a station in each district. This ensures that the evaluation is representative of each community. Devices will be placed on fire engines at the following stations:

Station 8- 463 51st Street
Station 12- 822 Alice Street

Station 13- 1225 Derby Avenue
Station 15- 455 27th Street
Station 18- 1700 50th Avenue (temporarily relocated, but engine is in service and operating)
Station 20- 1401 98th Avenue
Station 23- 7100 Foothill Boulevard

Staff will return with a report at the end of the evaluation period.

SUSTAINABLE OPPORTUNITIES

Economic: There are no economic opportunities associated with this report.

Environmental: There are no environmental issues associated with this report.

Social Equity: No social equity issues associated with this report.

DISABILITY AND SENIOR CITIZEN ACCESS

There are no disability or senior citizen access issues associated with the report.

RECOMMENDATION(S) AND RATIONALE

Enhanced patient care is a top priority for emergency medical services providers. The Lucas Chest Compression System has been shown to improve patient care by providing consistent compressions and allowing first responders to stabilize the patient quickly and control the scene. Staff recommends that the Committee accept this report on the planned use of the Lucas Chest Compression System for the period of September 16, 2009 through September 15, 2010 or until the device has been used on 50 patients.

ACTION REQUESTED OF THE CITY COUNCIL

Staff requests that the report be accepted by the Committee

Respectfully submitted,

Gerald A. Simon
Fire Chief

Reviewed by:
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Fire Administration /Office of the Fire Chief

Prepared by:
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Emergency Medical Services Division

APPROVED AND FORWARDED TO THE
PUBLIC SAFETY COMMITTEE

Office of the City Administrator

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