1. NEW AMBULANCE SYSTEM DESIGN

COMMITTEE RECOMMENDATIONS AS AMENDED

That Council

1. **Receive the update on the new ambulance / paramedic service including the system design report conducted by Fitch & Associates;**

2. **Approve the system design strategy to increase the ambulance fleet by 55%, increase paramedic staffing by 50%, increase the peak deployment of ambulances by 29% in high-density areas and quadruple the peak deployment of ambulances in low-density areas;**

3. **Approve the budget estimates to implement the system design commencing 1 January 2001 and approve the attached high-level system design and its goal to cut high-density response times between 4:46 and 9:04 minutes and low-density response times between 1:10 and 12:38 minutes;**

4. **Support the Ottawa Transition Board in its efforts to secure 50% provincial funding for these expenditures, as the funding of the ambulance service was promised to be 50/50 provincial-municipal by the Minister of Finance in 1999 and work with other regions and counties in Ontario on a priority basis to secure the necessary 50/50 funding;**

5. **Approve the implementation and associated funding of $1.97 million for a Public Access Defibrillation Program, based on North American best practices and designed to increase cardiac arrest survivor rates;**

6. **Direct staff to accept the Ministry of Health and Long-Term Care's revisions to the short-term action plan to bolster service between 15 August 2000 and 31 December 2000, with a total expenditure of $780,000, with the balance of $1.02 million previously approved for the short-term action plan be allocated to public access defibrillation;**

7. **Approve:**

   a) **The system design and the additional capital funding for the start-up plan, short term action and PAD program of $8.729 million;**

b) An addition to the 2000 Operating Budget of $1.991 million;

c) That the Finance Commissioner be directed to identify alternative funding sources for the amounts identified above prior to the Council consideration of these recommendations;

8. Whereas the applicable legislation requires Regional Council to designate, by September 3, 2000, the deliverer of ambulance service that will commence operation on January 1, 2001, Committee recommends that Council confirm the establishment of an in-house system, as per the attached system design;

9. Whereas the Transition Board, has been very successful in its attempt to gain Ministry approval for the transfer of dispatch, subject to the approval of surrounding Counties; THAT the Board be requested to continue its leadership on dispatch through to finalizing authority for a unified dispatch system;

10. WHEREAS the staff persons required to create the recommended management structure for the new service will need to be regional employees prior to the creation of the single city; RESOLVED THAT the new staff will take joint direction from the Medical Officer of Health and from the new city's General Manager of Protective Emergency Services;

11. THAT Committee recommend Council requests that the capital allocation and operating allocation for EMS upgrades, PAD program, and short term action plan, the funding for which have been identified within Regional resources, be approved by the Transition Board by August 20, 2000 in order to allow the necessary staffing and investments in equipment to proceed on an urgent basis.

DOCUMENTATION

1. Medical Officer of Health report dated 14 July 2000 is immediately attached.

2. Extract of Draft Minute, Community Services Committee, 20 July 2000 follows the above noted report and includes a record of all votes.

REGION OF OTTAWA-CARLETON | REPORT
RÉGION D'OTTAWA-CARLETON | RAPPORT

Our File/N/Réf.
Your File/V/Réf.

DATE 14 July 2000

TO/DEST. Co-ordinator, Community Services Committee

FROM/EXP. Medical Officer of Health

SUBJECT/OBJET **NEW AMBULANCE SYSTEM DESIGN**

DEPARTMENTAL RECOMMENDATIONS

That Community Services Committee recommend Council:

1. **Receive the update on the new ambulance / paramedic service including the system design report conducted by Fitch & Associates;**

2. **Approve the system design strategy to increase the ambulance fleet by 55%, increase paramedic staffing by 50%, increase the peak deployment of ambulances by 29% in high-density areas and quadruple the peak deployment of ambulances in low-density areas;**

3. **Approve the budget estimates to implement the system design commencing 1 January 2001 and approve the attached high-level system design and its goal to cut high-density response times between 4:46 and 9:04 minutes and low-density response times between 1:10 and 12:38 minutes;**

4. **Support the Ottawa Transition Board in its efforts to secure 50% provincial funding for these expenditures, as the funding of the ambulance service was promised to be 50/50 provincial-municipal by the Minister of Finance in 1999 and work with other regions and counties in Ontario on a priority basis to secure the necessary 50/50 funding;**

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PURPOSE

Over the past several months, staff have been preparing for the transition to a new performance based ambulance/paramedic service for the soon to be created City of Ottawa. The fundamental principles endorsed by Regional Council have continued to guide staff activities. Internationally renowned EMS consultant Fitch & Associates had been authorized to begin system design work for implementation of a new ambulance. Under the Board' supervision, Fitch & Associates analyzed the existing provincial service and provided a recommended system design for the new municipality. The purpose of this report is to present the system design findings and to seek capital and operating authority to create the new system necessary to be ready for the start date.

BACKGROUND

Current System

As part of their review, Fitch & Associates confirmed the ongoing principle that the current 'level of effort' system - based on activities rather than outcomes - is in dire need of upgrading. Response times and survival rates have continued to deteriorate. No additional resources have been added to the system over the past eight years. Call volume increased by more than 20 percent and hospital restructuring has placed additional pressure on the ambulance/paramedic system.

A careful review of the existing system and its performance level was undertaken and a plan has been outlined to put in place a new ambulance service that can make a real difference in survival rates. A large number of substantial changes are needed to improve the performance of the emergency medical system and to equip Ottawa-Carleton's highly-skilled paramedics with the tools they need to do the best job possible.

Fitch & Associates' study finds that the existing provincial system comes with severely limited resources, primitive technology and a history of chronic under-funding. The existing system only meets the accepted industry standard (8:59 minutes at the 90^{th} percentile) in about 51 percent of cases, in high-density areas. This results in response times up to 50 percent longer (or 14 to 16 minutes at the 90^{th} percentile) than other urban areas in Ontario.

The system offers even worse response times in the rural areas. Low-density areas are expected to be harder to serve, due to land area size and low call density. Despite this, rural residents experience grossly excessive response times to life threatening calls (up to 28 minutes at the 90th percentile) in the current system. Indeed, the current Ministry system does not meet its own response time requirements anywhere in the region.

Despite the failure of the system, the current system does possess high quality and dedicated personnel. It has also benefited from participation in the Ministry's OPALS study to introduce 78 Advanced Life Support paramedics and features strong, physician-based, clinical oversight.

In partnership with the existing paramedic force, the new City of Ottawa ambulance service will require a major overhaul and change to its system design in order to adequately meet the needs and expectations of the community and be accountable to its residents.

Actions to Date

The Region of Ottawa-Carleton has been preparing for the assumption of responsibility for ambulance / paramedic services for the past two years. Regional Council adopted the principles of a performance based ambulance system early in the planning process, obtained and first publicly reported response times (1997 to 1999) and undertook planning for the provision of services commencing 01 January 2001. Council also resolved that due to the value of the existing work force that the new system was to be designed so that the currently employed paramedics continue to be employed regardless of how the service is delivered.

Regional Council directed staff to develop a system design for an in-house service. Council also included the approval for a $1.8M allocation in the 2000 Capital transition budget to cover the cost of defibrillators, 7 additional ambulances and the associated medical equipment. It had been expected that the province would match this amount in accordance with the 50/50 funding principle for public health and ambulance costs.

The Ministry responded by providing funding of only $0.232M or 25 percent, instead of the 50/50 funding expected, for the replacement of the current defibrillators.

A Short Term Action Plan in the amount of $3.6M was also developed in early 2000 in response to new information regarding slow response times, declining survival rates, and the emerging need to bolster a failing system. This plan also anticipated a 50/50 funding arrangement (or $1.8M) with the Province. Council committed its share of this action plan for extra service on the road between now and 1 January 2000. Unfortunately, the Ministry has since advised that the current system's limited physical and human resources mean they will only be able to take advantage of $780,000 of the budgeted amount. It should be noted that the entire cost of the additional service is funded by the Region and that the province refused all funding of improved service. These regional dollars will nevertheless be allocated towards putting on extra shifts of paramedics and will have an impact in our community as of 15 August 2000.

The current status of transition and short-term action funding is shown below:

Item	*Funding Request*	*Approved/Granted*	*Status*
Short Term Action Plan (Proposed increase in unit hours for emergency/non–emergency, supervision, other)	50% MOH of $3.6 M	($0)	Denied
	50% ROC of $3.6 M	$1.8 M	Pending OTB approval
Y2K Capital Transition Budget (Defibrillators/ambulances)	50% MOH of $3.6 M	$0.23 M	
	50% ROC of $3.6 M	$1.8 M	OTB approval

The Ottawa Transition Board obtained approval from the Minister of Health and Long-Term Care in May 2000 for the transfer of responsibility for dispatch to the new City, conditional upon support of the neighbouring Counties. Fitch & Associates were retained to independently design the new ambulance / paramedic system, in keeping with Regional Council's directions to date.

System Design

Fitch & Associates undertook Phase I and Phase 2 of system design. These included a background review of the current system (Phase 1) to conduct a needs assessment and to conduct a preliminary high level system design, initial deployment methodology, resource and infrastructure requirements (Phase 2). This step outlines the architecture of the system necessary to meet established performance criteria as well as setting out the required operating and capital budget to implement the new system design.

Fitch & Associates confirmed the findings of Regional staff - the current system is not meeting acceptable service levels for a large emergency medical service. The independent study also confirmed that the current system faces serious challenges due to its large urban size and large rural area. Other barriers, such as the presence of rivers and other transportation impediments, further complicate reaching acceptable performance levels in Ottawa-Carleton. The magnitude of change necessary to meet acceptable North American industry standards is daunting.

Preliminary / high-level design for a performance-based system includes the following five elements:

- Clinical sophistication – *transition to all ALS; prevention and education; physician involvement; quality assurance process;*
- Operational reliability – *response time reliability; fire and police service first responders; evaluation of response times; managed deployment via dispatch*;
- Consumer satisfaction – *linked to improved performance; prevention and education activities; external review of complaints/resolutions*;

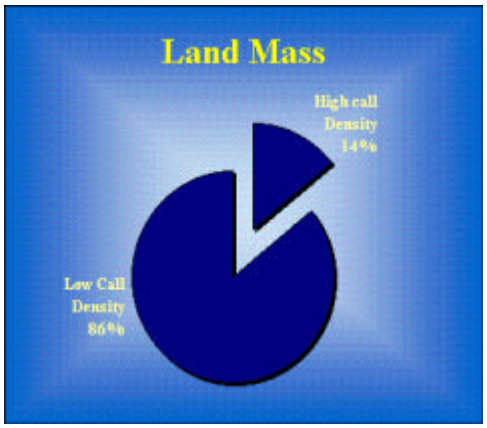
- Financial value for money – *predetermined funding levels for stability; entrepreneurial culture; future bid/benchmarking process to ensure best value*; and
- Performance accountability – *business structure; system specifications defined expected performance; fiscal accountability; future competitive process encourages focus on achieving standards and good value for money, public accountability through performance monitoring and public reporting*.

The new ambulance service will be aligned with Emergency and Protective Services within the new organizational structure of the single municipality. It will have a close clinical alignment to the Medical Officer of Health and an independent Medical Director. The service would have 4 functional areas: Operations; Communications; Clinical Programs and Quality Improvement and; Support Services and Logistics (see attached organizational chart). Much of the operating funds recommended are needed this year so these individuals can be hired and working no later than the end of September. That will leave them with 90 days to gear up for the transition.

The new system will be divided into two areas – one high density or urban area and one low density or rural area. The distinction is not based on municipal boundaries, rather on historical call demand patterns. Therefore, communities like Stittsville, are part of the high-density service area even though it is currently in rural townships. Conversely, parts of the current cities of Kanata or Gloucester are part of the low-density call area. Because the rural areas represent 86% of the land area and only 6% of the calls for ambulance service, properly serving the rural areas will require disproportionately more resources. Meeting the goal of dramatically cutting rural response times will mean investing significant dollars in this part of our community. For example, approximately one-third of the deployed ambulances and about 30% of the ambulance bases will be located in the low density areas, even though they comprise just 6% of the total call volume.

In the new City of Ottawa, 94 percent of the call volume originates in the high-call density area, while accounting for only 14 percent of the land area. Currently (1999), high call density response times to life threatening calls range from 13:45 to 18:03 minutes at the 90th percentile.

Land Mass vs. Transports



Dedicating nearly one-third of the system's total ambulances to the low-density areas will attain an excellent low-density performance level of arriving within 15:59 minutes at the 90th percentile. While this level of funding represents a significant contribution from the new city's urban tax base to support a vastly-enhanced rural ambulance system, this is a necessary investment in the health and safety of those residents. The presence in the rural areas must be quadrupled from the present level of two vehicles to a new minimum of eight to ten ambulances.

Achieving better survival rates in cases of cardiac arrest will also be possible through equipping municipal police with defibrillators as described latter in this report. In addition to the eight to ten ambulances deployed in the low-density area, eight police vehicles service that region as well.

Currently (1999), response times to life threatening calls in low density areas range from 17:09 to 28:37 minutes at the 90th percentile. With additional resources the goal will be to achieve a consistent response time of 15:59 throughout the rural areas.

Key Challenges

Currently the Ministry of Health and Long-Term Care administered ambulance system and will do so until the end of the year. MOHLTC employs a two-tier system which utilizes "Patient Transfer Vehicles" to perform inter-facility transfers. Single purpose transfer vehicles are unable to respond to emergency medical calls. This approach is intended to provide timely service to sending facilities (i.e. hospitals), however the effect is a decrease in resources in the emergency system. As a result, the practice will be discontinued.

In addition, the current system has a mix of Primary Care Units and Advanced Care Units. Where a crew is made up of two Primary Care Paramedics, a second crew that has an Advanced Care Paramedic is often dispatched to a life-threatening call, thereby using two ambulances for a single call rather than one. This duplication further depletes the resources available to respond to emergencies.

There is a direct correlation between rapid response times combined with advanced paramedic care, and the survival of cardiac arrest victims. Local cardiac survival rates are extremely low (3.8% in 1999) compared to other urban centers such as Toronto or Calgary which are about 25%.

Time on task (TOT) is defined as the time it takes from the point a call for assistance is received by dispatch, until the ambulance/paramedic crew is again available for assignment. The North American industry urban standard for TOT is approximately one hour. Based on the data from the Ministry of Health and Long-Term Care, the time on task in Ottawa-Carleton is reported as two (2) hours in the current system – double the TOT experienced in Calgary and Toronto.

Numerous factors influence time on task locally including poor supervision, hospital restructuring/bed shortages, available resources, increased travel time due to facility specialization and relocation of trauma centers and diagnostic tools. Reducing TOT is crucial to balancing overall service and value for money.

Improved technology and management practices are expected to decrease the current time on task significantly. Good communication and cooperation with the medical community will be necessary to facilitate the needed changes and reduce time spent waiting when delivering non-critical patients. The TOT for Ottawa should be an average of one hour. In the low-density area, a two-hour time on task target has been used due to increased travel time from outlying areas.

Improving the quality of the care available from the ambulance service is also a critical factor in improving survival rates. In keeping with this patient care principle, the system design calls for moving to a full Advanced Life Support (ALS) paramedic service. The goal of progressing to an all ALS, or single-tier system, is based on all crews and vehicles on duty being capable of attending to all medical calls thereby expediting calls and minimizing the resources necessary. Realizing the goal of a 60:40 ratio of Advanced Care to Primary Care paramedics however, will be a challenge as 'competition' or demand for qualified and fully trained personnel intensifies across Ontario. Indeed, training capacity, whether through community colleges and private institutions, or in-house is a critical implementation hurdle.

It is important to note that most regions and counties in Ontario are making significant investments in paramedic training and paramedic pay. If we are to be successful in recruiting and retaining the kind of highly-skilled talent required to make this whole new system work, the new city of Ottawa will need to make the kind of commitment outlined in this plan.

Rural coverage today is provided in great measure by neighbouring county ambulance systems. Through a system of charge backs, these services answer many calls in the far-east and west of the municipality. After 1 January 2000 the responsibility for serving all of these rural calls will fall to the new Ottawa ambulance service and back-up from adjacent counties will not be as readily available.

Other features of the proposed system design include:

- Expanded fleet;
- Continuation of first responder program;
- Single work start reporting location in high density area, with multiple stations strategically placed for optimum resource placement;
- Full control of dispatch, using Advanced Medical Dispatch Protocol, Automatic Vehicle Locator system, and other current technology common in performance-based systems;
- Structural alignment within Protective and Emergency Services, with linkages to the Medical Officer of Health;
- Shared resources/strategic alliances as mutually beneficial;
- Regular and independent measurement and reporting;
- Additional ongoing training to ensure the clinical and operational competency of the staff delivering patient care;
- Variable deployment methodology based upon historic call demand patterns and geographic coverage;
- Improved operational management and monitoring to improve production capacity and meet call demand more effectively; and
- Flexible staffing to call demand and emergency reserves to manage large scale incidents and peak demand.

By way of comparison, the proposed and current systems are illustrated below. It is not a 'Cadillac' version, but a system that is required to correct the current flaws and to deliver the current best practices and accepted industry standard to the citizens of the new City of Ottawa. The overall objective is to implement a system not unlike that currently in place in Toronto and Calgary.

System Features	*Existing MOH System*	*New Ottawa System*		*Change (2000 - 2003)*
		2001	*2003*	
Response Time @ 90% (Code 4)				
High Density Zone	13:45-18:03	11:59	8:59	(4:46-9:04)
Low Density Zone	17:09-28:37	18:59	15:59	(1:10-12:38)
Unit Hours	141,000	195,040	220,464	+56%
Fleet				
Ambulances	31	43	48	+55%
Other	10	10	10	---
Peak Ambulance Deployment				
High Density	18	23	27	+29%
Low Density	2	8	8	+300%
Paramedics (FTEs)				
Primary Care Support	83	126	98	
Advanced Life Support	74	90	146	
	157	**216**	**244**	+55%
Facilities (Bases / Posts)				
High Density	7	17 – 24	17 – 24	
Low Density	2	8 - 10	8 - 10	

System Start Up

The new City of Ottawa must be up and running on 1 January 2000. The new city must launch an effective and professional new ambulance system at the same time. With the number of business days between now and system start-up rapidly shrinking, a number of critical issues remain to be resolved and concrete steps need to be taken to build the infrastructure necessary to be ready.

Immediate needs for both operational and capital requirements have been identified to implement the new system design. The funding of these requirements must be in place in time to have filled all of key positions no later than the end of September.

The funding of the new service, including the 4 organizational units, will need to be available over the remaining months of 2000. These resources are required for the staffing up, the development of the programs, policy and procedures, the transfer of existing and purchasing of additional fleet, equipment, supplies and refurbishment of base facilities in order to be ready at start up.

Start up technology includes items such as computer aided dispatch upgrades, a new Advanced Medical Priority Dispatch System, automatic vehicle locator system and improved radio system. Technology upgrades must provide enhanced performance, replace or develop infrastructure, improve clinical care, improve deployment and enhance safety.

Funding Requirement of the Performance-based system

The cost of a performance-based system has previously been estimated at up to $25 million. At that time the system was clearly underfunded, the question was how large was the funding gap. More detailed costs estimates are now available with the detailed system design. Start-up costs are expected to be $2.7 million in operating costs and $9.6 million in one-time capital costs. The operating start-up costs include the hiring of management, field support and administrative staff as well as other operating expenses prior to 1 January 2001. Capital start-up expenditures provide for additional vehicles and equipment, base stations, headquarters and technology required to improve response times and provide sound clinical care.

For 2001 to 2003, operating costs are estimated between $27.3 million to $29.9 million; capital expenditures will be $3.3 million in 2001 and will be $3.8 million by 2003. The three-year initiative of training Primary Care Paramedics to the Advanced Care Paramedics level will cost $1.9 million in 2001 and just over $2.0 million in 2003. By the end of 2003, the new City of Ottawa will be in a position to provide full Advanced Life Support care and meet predefined performance targets to ensure the health and well being of our community.

New City of Ottawa
Ambulance Services
Cost Estimates (in millions)

	2000 Start-up	2001	2002	2003
Total Operating Costs	**$ 2.73**	**$ 27.32**	**$ 28.18**	**$ 29.86**
Capital	**$ 9.57**	**$ 3.32**	**$ 4.17**	**$ 3.79**
3 Year Start-up ALS Training		**$ 1.95**	**$ 1.99**	**$ 2.03**

To date, the MOHLTC has not approved any expenditure on a 50/50 cost-sharing basis beyond the established ambulance budget downloaded to the Upper Tier Municipalities. There has been no clear definition provided as to what comprises 'approved' costs since the new cost sharing was announcement made in March 1999.

The provincial system has been chronically under funded resulting in equipment and technology that lags behind industry advances. The system design has been developed to, not only correct the current state of the ambulance system, but to measure and report on it.

Public Access Defibrillation (PAD)

In addition an investment in a Public Access Defibrillator program will allow for additional improvement in survival rates from sudden cardiac arrest above those possible through the Emergency Medical System. This is particularly true in rural areas where the 8-10 ambulances available will be matched by 8 police units equipped with PADs.

When a person has a cardiac arrest, the most common rhythm disturbance is ventricular fibrillation. The most effective treatment is rapid defibrillation, a shock that is delivered to restart the heart. Without this intervention the heart becomes resistant to treatment over a few minutes and within minutes the heart dies.

At one time defibrillators were only found in ambulances. As these units have become smaller, more durable, less expensive and simpler to operate they have become available for use by first responders such as firefighters. This generation of defibrillators are so simple to operate that communities throughout Canada and the US are placing them in public places so they can be accessed quickly if needed in medical emergencies.

Public access defibrillators are a class of public health equipment now in use in the United States and in other jurisdictions in Canada. These devices allow non-medical personnel including the public and first responders to use an automatic defibrillator to restart an arrested heart rhythm. With recent technology, manufacturers have been able to ensure that safeguards are built in, to protect both the patient and the user, making truly public access defibrillators widely available for the first time. These devices are enabling victims of cardiac arrest to have a significantly greater chance of survival.

Public Access Defibrillators are easy to use. Anyone who certifies in CPR can be trained a step further to use them effectively. The units use voice prompts to assist throughout defibrillation.

There are many public access / police defibrillation program initiatives going on throughout North America. Improvements in survival for victims of sudden cardiac arrest strongly endorse development of these programs. Some examples of programs are listed below:

- Rochester, Minnesota has achieved a 45% survival rate
- Seattle, Washington has achieved a 30% survival rate
- Las Vegas Casino project has achieved a 55% survival rate
- Windsor Casino has achieved a 65% survival rate
- Chicago O'Hare Airport has to date 9 of 11 victims surviving cardiac arrest since the program's inception just over 6 months ago.
- Miami Dade Police have recently incorporated AEDs into its police response equipping over 2000 police vehicles
- New York City Police Department AED Program
- New York State Police Department AED Program
- Suffolk County Police Department AED Program
- Utah Highway Patrol AED Program

Non-medical first responders such as police, security guards, bus drivers, lifeguards, hotel and health club staff are being trained to use these machines in the same situations they might offer CPR. EMS have a greatly enhanced chance of saving a life when a first responder is able to apply a defibrillator.

The Heart and Stroke Foundation of Canada (Appendix A), the American Heart Association and the Canadian Association of Emergency Physicians have urged communities to implement PAD programs. Given the current survival rates, a Public Access Defibrillation program is a priority.

By equipping municipal police with PADs, as well as institutions and agencies, the Region and the new city of Ottawa will get tremendous return for a modest investment.

The PAD Program

1. Equip police vehicles with PADs and train the police force to respond to cardiac arrests.
2. Equip and train targeted responders in key locations in the region characterized by significant people gathering or large human traffic areas. PADs would be mounted in wall cabinets.
3. Encourage private sector and not for profit organizations to actively participate in this program through a high profile campaign to provide a safer workplace for employees and customers.

The municipal facilities which are proposed to have PAD's are:

Police

• HQ	1
• Community Police Offices	28
• All police patrol units	120

Major municipal buildings

• City Halls	3
• All community centres, arenas, pools, recreation complexes	119
• Other community locations	66
Total	337

Equipment

In order to evaluate the PAD equipment available in the marketplace, a committee was formed comprised of Dr. Geoff Dunkley, Deputy Medical Officer of Health, Dr. Justin Maloney, Medical Director of the Base Hospital Program, and Dr. Graham Nichol, of the Ottawa Heart Institute. Dr. Nichol is an internationally recognized authority on the effectiveness of PAD programs.

Evaluating the equipment available for a PAD program entails mostly medical consideration. As it happens the two primary PAD units available are approximately the same cost. Recommendation of the preferred equipment was therefore not as price dependant as it was functionality dependant. The track records of the vendor companies and their maintenance provider were also factors for consideration.

The report of the group recommended the Lifepack 500 by Medtronic. The list price of the preferred unit, with all of the required hardware is $6060.00 each. The Life Pack 500 is a biphasic deliberator which are much more effective than previous PADs. The units also record the audio of incident while the PAD is in operation. These recordings are of great assistance in analyzing and incident.

By dealing directly with the manufacturer of the selected PAD a 35% volume discount has been obtained. On a per unit basis – each Life Pack 500 will cost $3939.00. This price includes all necessary hardware for mounting the unit. It also includes the provision of heated storage bags for use in police vehicles. The total equipment cost will require a capital commitment of $1,367,266.00 including applicable taxes. This will provide for 337 PADs with associated hardware. The training and maintenance aspect of the PAD program should be the subject of a competition in early August 2000 for an appropriate supplier.

Training

The training program associated with the delivery of the PAD program will be offered for competition. There are several excellent training companies in Ottawa-Carleton. The St. Johns Ambulance also offers training in PADs. Competitive bids should be sought for a single supplier to install the units, train the staff who will use the unit, train instructors and conduct routine inspections of the PADs.

Recommended training requirements include approximately 6-8 hours for laypersons. Training is done in groups and includes didactic and scenario based training designed to ensure confidence in responding to victims of sudden cardiac arrest. Certification is by a physician medical director. Annual re-certification / refresher training is recommended.

Initial training of police personnel will be required though outsourcing. The training of police instructors will allow for subsequent training for police officers and will take place in conjunction with existing CPR training. Experience in other jurisdictions has proven this to be the most effective method of implementing a successful police defibrillation program.

A further capital allocation of $600,000 above the purchase price for should be made for the initial cost of training, the overall medical authority and routine inspection.

Service / Maintenance Requirements

The Lifepak 500 is designed to be used in a low maintenance environment. The battery will last approximately 5 years without charging required. Automatic internal verification systems initiate a system check every 24 hours and will alert to any service requirements or low battery indicator.

Storage temperature range of the Lifepak 500 is -30°C to +65°C (with battery & electrodes maximum exposure time=1 week).

The Lifepak 500 has a 5-year warranty with purchase. Medtronic Physio-Control is extremely well regarded for the technical service and support it provides via a dedicated Canadian service team. The technical service operations provide 24 hours emergency coverage.

Charitable and Private Sector Participation

By using its buying power the municipality will also make it a condition of purchase that the volume discount offered to the program is also made available to the community for a six-month period. The PAD supplier has agreed to extend the 35%volume discount available to the region to the private sector (malls, golf courses, private nursing homes, etc.) and to not for profit groups (churches and synagogues, large community meeting halls, non-profit group homes).

A community based group, working with service clubs, have been fundraising to purchase PADs. The boost of a 35% discount will allow the group to help community groups participate as well as the private sector

Indemnification

PADs now have so many failsafe mechanisms that any incremental liability for the municipality or the user is negligible. In addition the maker of the PAD indemnifies the anyone who receives training against any liability in using the unit, including police officers.

Data Management

The comprehensive CodeStat Suite software transfers event data captured in the AED to a central location (ie. Base Hospital) to link with the ambulance record and provide post event review and quality assurance program data. Data would be sent via modem from any remote sites to Base Hospital. This would ensure an essential link to Base Hospital and coordination with local paramedics in transfer of care.

FINANCIAL COMMENT

Operating Budget

The Provincial funding amount is based on the on the 2000 Annual Estimate from the Province. The additional funding requirement identifies a requirement for start-up costs as part of assuming responsibility for ambulance services. Of the $2,046,000 identified, $1,991,000 will result in additional funding to the 2000 Operating Budget.

Capital Budget

The Provincial funding represents the Provincial decision to only fund $232,000 for badly needed defibrillators. The additional funding requirement of $7,782,000 represents the capital start-up costs (vehicles and equipment, base station, headquarters and technology requirements) required to assume the delivery the ambulance services to the new City of Ottawa effective 1 January 2001.

Short Term Action Plan

On 14 June 2000, Regional Council approved $1,800,000 to provide additional unit hours to the existing services in Ottawa-Carleton, which was subject to the Ottawa Transition Board approval. Based on the information from the Ministry of Health and Long Term Care, the current system can only accommodate $780,000 of additional unit hours. The balance of the

funding, $1,020,000 will be used towards the acquisition of Public Access Defibrillators. The additional funding requirement of $947,000 represents the balance required to purchase (including training) the Public Access Defibrillators.

FINANCIAL STATEMENT AND APPROVAL

	Operating Budget 151713 $	Capital Budget 900453 $	Short Term Action Plan * $
Total Budget Requirement	17,047,000	9,799,000	2,747,000
Provincial Funding	(7,157,000)	(232,000)	0
Net Budget Requirement	9,890,000	9,567,000	2,747,000
Approved Budget to Date	(7,899,000)	(1,785,000)	(1,800,000)
ADDITIONAL FUNDING REQUIRED	1,991,000	7,782,000	947,000

* The approved portion ($1,800,000) of the Short Term Action Plan capital budget represents approval by Regional Council at its meeting of 14 June 2000 which was subject to the Ottawa Transition Board approval which has not occurred as of 14 July 2000.

Additional budgetary authority of $1,991,000 is required for the 2000 Operating Budget, Order No. 151713, Land Ambulance, Reference page 287; $7,782,000 is required for the Capital Budget, Order No. 900453, Land Ambulance Transition, Reference page 117 and $947,000 is required for the Short Term Action Plan.

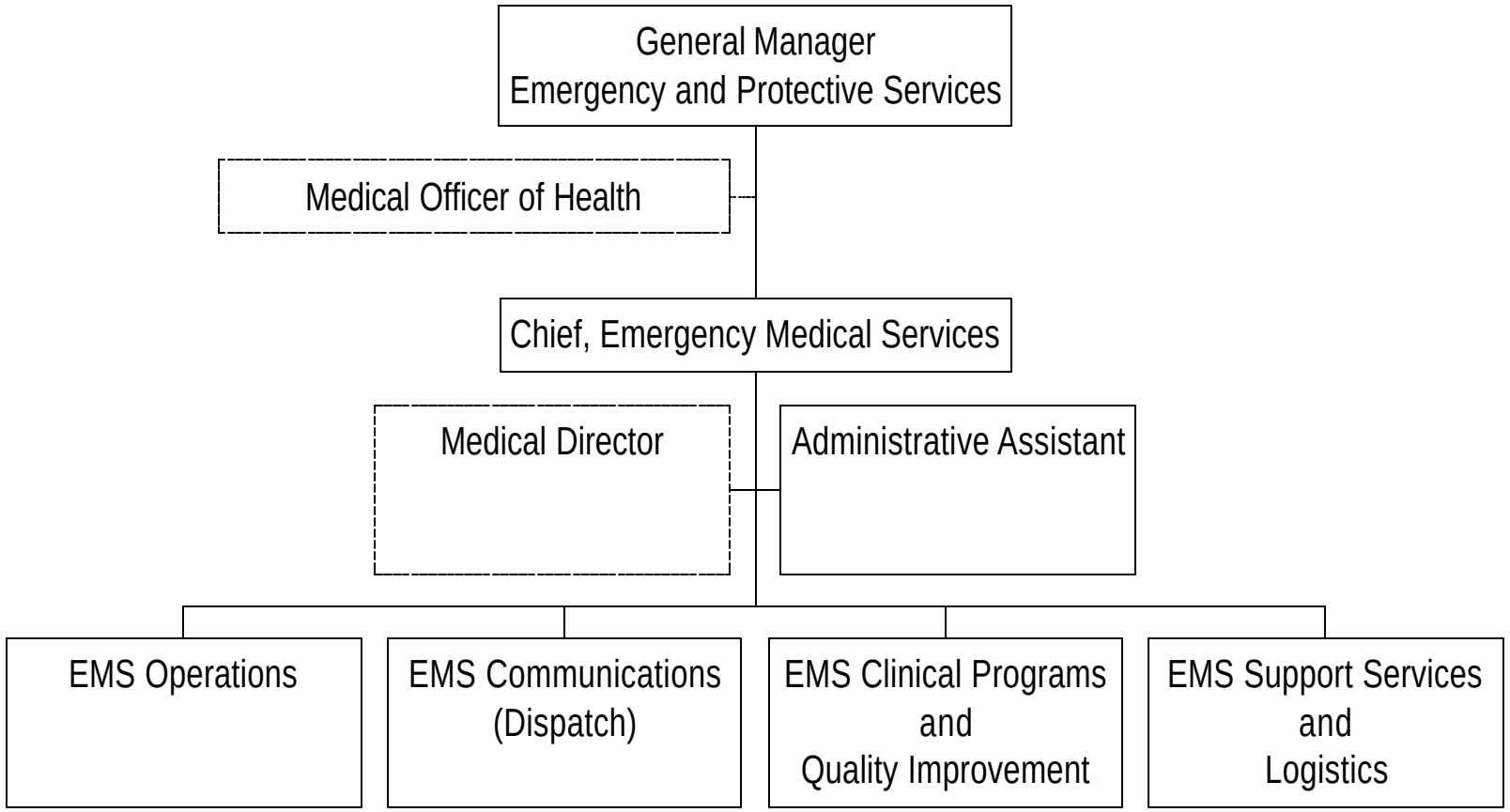
CONCLUSION

Restructuring ambulance / paramedic services for the new City of Ottawa requires more than a change in employers if the ambulance system is to properly serve patients, to provide good value for money, and to improve response times and survival rates accordingly.

The initial findings arising from the system design work undertaken by Fitch & Associates indicates a greater level of resources required to meet the performance expectations for the new City of Ottawa ambulance service. In order to be prepared to implement the new system by 1 January 2001, approval must be obtained to proceed with the start up plan based on the high-level system design.

Approved by
Robert Cushman, MD, FRCPC

New City of Ottawa Ambulance Service
Proposed Organizational Structure



FITCH & ASSOCIATES, LLC

Draft Summary Report – July 2000

Overview

Land Ambulance Service is an extremely visible public health service typically delivered in sub-optimal environmental and emotional situations. The objective is to implement a performance driven system including the provision of medically required emergency and non-emergency ambulance services for the new City of Ottawa that balances clinical care, innovation, customer satisfaction and cost. The design implemented must provide good value for money and be sustainable.

High-Level Business Plan

A performance driven system, guided by detailed written specifications, to maintain its performance despite changing demographics, provides response time reliability, advanced care levels, and appropriate utilization of resources to ensure economic efficiency is required. A competitive procurement or performance benchmarking can be conducted at a predefined future point in the system's development to ensure that it continues to represent best value over time.

Our Findings

The system has been under resourced. It is devoid of day-to-day supervision. The system requires, on average, twice as long to complete each transport as does comparable Canadian and American systems. The design must facilitate reduction of this "time-on-task" performance, decreasing it in the high-density call area from greater than two hours on average to an average of one hour. Failure to do so will dramatically impact system performance and will likely have staggering cost consequences. We concur with staff's finding that the system is underserved and has excessively long response times.

Implementation Timetable

The transition to a fully staffed and performing system is anticipated to take three years. This three-year process is primarily due to the time required to recruit and train staff.

The actual implementation process needs to become aggressive no later than August 2000 to achieve a smooth and successful transition. Outside resources will likely be required to implement and manage the system during its start-up phase.

Defining Service Areas

Response time performance measurement is a key indicator of system performance. The measurement of performance is accomplished by defining geographical areas. For this purpose, the City of Ottawa will be divided into two areas. High-density areas have been designated when twenty-four or more responses in a square kilometer occur annually, in blocks of not less-than six square kilometers. Areas of high-density (to the extent practical) will remain contiguous. Areas of lesser call demand are considered low-density areas. The determinates of historic response volume and population density conform the validity of this process.

The following chart demonstrates the relationship with land mass and transport

Area	Transport Percentage	Land Mass Percentage
High-density	94.2% of transports	14.3% of land mass
Low-density	5.8% of transports	85.7% of land mass

Responses time criteria High-density Priority 4 (Emergency)

Current	Industry Standard	Today's Compliance
14:45 min. @ 90%	8:59 min. @ 90%	51.0% @ 8:59 min.

Responses time criteria Low-density Priority 4 (Emergency)

Current	Industry Standard	Today's Compliance
22.41 min. @ 90%	15:59 min. @ 90%	60.4% @ 15:59 min.

Unit hours in the new City of Ottawa

Area	Existing	Proposed
High-density	123,480	144,543
Low-density	17,560	70,080

Staffing

Advanced Life Support Systems (ALS) is the benchmark for quality and sophisticated pre-hospital care in North America. The all Advanced Life Support system is consistent with cities of Ottawa's size throughout North America. The transition towards an ALS system has effectively been underway for the past five years. This transition should be accomplished in not more than three years. Competition for ALS staff is increasing as other communities are moving to ALS systems. Today there are fewer than 50% of the ALS trained personnel in the system that will be needed to accomplish this requirement.

Ambulance Vehicles

The initial review of the vehicles indicated too few ambulance vehicles. The existing ambulances are marginally equipped and configured to accomplish the required mission. As vehicles are acquired and replaced, the new vehicles should be designed to meet the mission. The following chart compares existing and needed ambulances. The ability to initiate service on January 1, 2001 necessitates acquisition of additional ambulances by December 1, 2000. The ambulance fleet will grow from its existing size of thirty-one to forty-eight over the initial three-year period using an industry standard fleet size ratio of 125% of peak load staffing.

The following graph demonstrates the initial peak load staffing verses existing peak load staffing

Area	Current Peak Ambulance Staffing	Proposed Peak Ambulance Staffing
High-density	18 ambulances	23 ambulances
Low-density	2 ambulances	8 ambulances

Facilities

A single "report-to-work" base is needed to increase productivity in the high-density area. There is currently no facility of this type in the system. Five "report-to-work" locations currently are utilized. Crews starting shifts are often dependent on a crew ending their shift to receive an ambulance ready for service. This approach has two specific disadvantages: vehicle exchange processes and coverage. When a crew catches a "late" call at the end of their shift it places that crew in an overtime situation. Oncoming crews wait at the report station, on the clock, and cannot go in service because they have no ambulance. The second issue is the challenge of providing proper deployment coverage when there are multiple report locations. Coverage is commonly compromised to get units on and off duty.

The single report station allows for efficient use of supervisory staff, vehicle maintenance and support staff. It minimizes movement during the shift period while allowing for maximum coverage and improved response times. The fleet size can reasonably be reduced to a 125% of peak load staffing verses the industry standard for multiple start locations of 135% to 140% of peak load staffing. Today the fleet is at 155% of peak load staffing.

Paramedics in the low-density area will continue to utilize "report-to-work" base stations due to geography and coverage requirements.

Base Stations

The system's ability to meet response times will in part be dependent on appropriate geographical base station locations. The current base station locations are inadequate in quantity and in some circumstances poorly located. The following chart depicts the anticipated needs.

Area	Current Number of Stations	Recommended Number of Stations
High-density	5 stations	17 - 22 stations
Low-density	2 stations	8 - 10 stations

Technology Upgrades

Technology is an integral component of efficiency and performance. It is highly unlikely that response times will be achieved without an investment in upgrading these tools. Known technology upgrades will include: Automated Vehicle Location and Global Positioning System (AVL/GPS), the City's trunked radio component, Computer Aided Dispatch (CAD) related enhancement and interfaces, Advanced Medical Priority Dispatch System (AMPDS) and a driving monitoring safety program.

Funding

The true cost of ambulance operations has been unknown due to the manner in which the costs have been allocated. Provincial cost estimates were for a level of effort system that does not meet performance standards. The significant difference in cost is primarily based on the new system requiring more staffed ambulance unit hours to achieve acceptable performance.

Previous local cost estimates, prior to system design and a detailed unit hour analysis were in the range of $20-25 M. Fitch & Associates has estimated the first year operating costs at $27.3 M. These are "activity based" cost estimates and are inclusive of some shared service costs that may ultimately be allocated to corporate departments in accordance with municipal policy.

New City of Ottawa
Ambulance Services
Cost Estimates (in millions)

	2000 Start-up*	2001	2002	2003
Operating	**$ 2.7**	**$ 27.3**	**$ 28.2**	**$ 29.9**
Capital	**$ 9.6**	**$ 3.3**	**$ 4.2**	**$ 3.8**
Vehicles & Equipment (New)				
Additional Equipment (Existing Fleet)				
Base Station Equipment				
Headquarters Equipment				
Technology Equipment				

3 Year Start-Up ALS Training	**$ 1.9**	**$ 2.0**	**$ 2.0**

* Excludes Existing 2000 Operating Budget Amounts

Extract of Draft Minute
Community Services Committee
20 July 2000

1. NEW AMBULANCE SYSTEM DESIGN
- Medical Officer of Health report dated 14 July 00

Dr. R. Cushman, Medical Officer of Health, expressed pride in the ambulance system design being considered by Committee, and congratulated Mr. Steve Kanellakos on his position as the new General Manager of Protective/Emergency Services for the City of Ottawa.

Dr. Cushman noted that the report is a comprehensive proposal including the system design, the short-term action plan, and a community response element with the public access defibrillators.

Ms. Joanne Yelle-Weatherall, Director, Finance and Administration, Health Department, summarized the background of the development of the system design, noting that Fitch & Associates were retained by the Transition Board to develop a blueprint for a new ambulance system in Ottawa-Carleton. The plan is a detailed one on how to save lives in a cost effective manner. The findings of the Fitch report were presented to the Medical Officer of Health, the Transition Board and the Regional Chair in early July, and Dr. Cushman then prepared the report being considered by Committee. Council will consider Committee's recommendation at the meeting of 9 August 2000, and then the Transition Board will consider the recommendation of Council.

Ms. Yelle-Weatherall noted that the deadline for assuming the service is rapidly approaching. She provided an update on the dispatch system, where the province agreed to provide 100% of the funding if Ottawa-Carleton could get endorsement from neighboring counties. She noted that it will not be acceptable if the province provides funding based on 1996 levels as it would be insufficient to improve service. She noted that the Association of Municipalities of Ontario has issued an alert that advises that they will not meet with the province again until they receive a reply on the issue of funding.

Ms. Yelle-Weatherall introduced Dr. Jay Fitch of Fitch & Associates, which was established in 1984, and has extensive experience in designing ambulance systems in Calgary, Edmonton and Saskatchewan.

Dr. Fitch advised that cardiac arrest survival rates approximate 3.7% in Ottawa-Carleton compared to 25% in Toronto and Calgary. To achieve the mandate of improved care the system must be clinically sophisticated, operationally reliable, satisfy customers, ensure value for money and be accountable for performance. The model proposed is a performance driven system, which must maintain its performance, provide response time reliability and advance care levels. The system can be measured and reviewed to ensure ongoing benefit to the community.

The system develops strategic alliances with first response providers in the community and relationships with health care providers. There are 2 clearly defined response patters: a high density area which comprises 14% of land mass and 94% of the call volume, and a low density area which comprises 86% of the land mass, and 6% of the call volume.

The key determinant for most people who will use these services will be response times, which should be 8 minutes 59 seconds in the high density areas and 15 minutes 59 seconds in the low density areas. That standard is currently being met 5 out of 10 times in the high density areas, and 6 out 10 times in the low density areas. This will require a phase-in period over 3 years, which includes an advanced life support system, with a 56% increase in the ambulance coverage hours, multiple base stations, an increase from 31 to 43 ambulances, and a variety of improved technology requirements that need to be addressed to achieve the care mandates.

Mr. Fitch stated that dispatch is a critical component of the system. The cost of the new system is significant, and operating costs will approximate 27 million dollars in the first year, and will have a significant positive impact on the quality of life of people in the community. He added that there are only 115 days left until the ambulance system is assumed.

Dr. Cushman noted that the short term action plan has been a concern for some time, and the proposal is to spend $780,000 as of 15 August 2000, in order to improve the system, and add an additional 1500 hours of service per week, which would increase service by approximately 25%.

Dr. Cushman proposed that 1 million dollars be transferred from the short term action plan to the public access defibrillator (PAD) project, with an additional $150,000 funding required. These PAD's will be placed in targeted municipal buildings, community locations and police vehicles, and extensive training will be provided to personnel to ensure that there are capable first response health providers in the community.

Dr. Cushman distributed a report prepared by Dr. G. Dunkley, Dr. J. Maloney and Dr. G. Nichol on the selection of an automatic external defibrillator for use in the Ottawa Public Access Defibrillation Program. He summarized, noting that the competitors were roughly equal in price, however in preliminary negotiations with one manufacturer a 35% volume discount was obtained, which will permit placement of additional PAD"s in the community. The discount price has also been made available for 6 months to private organizations wishing to purchase the devices.

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Dr. Cushman noted that the report advocates for the selection of one provider, Medtronic. Although the systems reviewed were similar, there were doubts expressed by the medical community about the technical and training support provided by the other supplier.

Dr. Graham Nichol advised that he works at the University of Ottawa conducting economic and effectiveness evaluations of emergency cardiovascular care. Cardiac arrest happens approximately 35,000 times per year in Canada, with a survival rate of 4% in Ottawa, which is in the middle range when compared to cities across Canada. There is a direct correlation between defibrillation and cardiac survival, and many communities in North America have implemented a public access defibrillation program with a high survival rate.

Dr. Nichol made reference to PAD's situated in airports and casinos with tremendous success, for use by trained personnel. He noted that untrained people have also used them successfully and safely, and there have been no adverse effects on patients or people administering the device.

In response to a query from Councillor L. Davis, Dr. Nichol noted that the machine under consideration has a battery that will last for approximately 5 years. He noted that administration of defibrillation should be part of the emergency medical response, and is the first, but not only, treatment for the situation. Dr. Cushman stated that as the case becomes more problematic, an increasing level of health care providers with advanced skill will arrive at the scene. The PAD determines when a shock is indicated and will not permit a shock to be administered unless it is warranted.

Dr. Nichol advised that a recent study evaluated the effectiveness of defibrillation and advanced life support in Ontario, concluded that out of 20 cities, there is a wide range of survival from 0% to 30%. Ottawa is in the middle at 4%, so there is a tremendous opportunity to help people here by improving emergency medical services. He added that several years ago, the United States proposed the concept of public access defibrillation systems by non-medical personnel such as "first responders" who are trained to respond to medical emergencies, "traditional targeted responders" who are trained to respond to emergencies and who would be trained to defibrillate; and "non-traditional targeted responders", individuals without the duty to respond who want to be trained and assume that duty.

He explained that defibrillation can work when people, other than police, operate the PADs. One study put these units into 18 casinos in Las Vegas and security guards were instructed to provided CPR and defibrillate. A short video illustrated to committee members how easy it was for a person to operate the defibrillator. Of the 148 cases with these machines, there has been a 39% survival-to-discharge rate. Also, in a Chicago airport, these units were installed and the airport police were trained to defibrillate.

This program has only been in place for six months so results are clearly preliminary; however, out of the 12 cases of sudden cardiac arrest, there has been a 75% survival-to-discharge rate. Interestingly, 60% of users were untrained bystanders. With respect to user safety of PADs, Dr. Nichol stated that there have been no adverse affects reported in the Chicago program and there have been few, if any, reports of adverse affects from uses of these devices in other settings. All defibrillators designed and marketed for public access use have both voice and visual prompts which walk the person through the process.

He went on to state that for PADs to be successful, the location of these devices must be carefully selected. He agreed that police defibrillation is a good idea, as is a "targeted responder" program where they are put into the community. He suggested aiming for a defibrillation response time interval of 2 to 3 minutes.

Councillor Davis inquired how many times a person, who has had no medical training, can use the equipment on an individual. Dr. Nichol advised that there is no limit, but it needs to be implemented as part of the chain of survival and should be integrated with the existing emergency medical system (EMS). The training program for PADs include well-defined protocols which consist of applying the machine, allowing the machine to analyze and then firing the unit, if it indicates that a shock is necessary. He confirmed that all the interpretation of the person's condition is done by the machine, not the responder, and it will advise them whether another shock is needed. To explain the ease for untrained individuals to operate the device, a physician in Seattle conducted an experiment whereby paramedics, firefighters and grade 6 students were put in a room one by one with a defibrillator and a dummy and the students did not take any longer to use the machine than the firefighters.

In response to additional questions posed by the Councillor, Dr. Cushman advised that the average cost per unit is approximately $6100. However, staff have procured a discount of approximately 35% bringing the cost to under $4000. Given the relatively low cost of this equipment, Councillor Davis thought it might be more cost-effective for people to have their own unit. Dr. Cushman agreed that the availability and the mobile availability of these units is key and it is proposed that all police patrol units have defibrillators, noting this would be particularly important in the rural areas where the coverage of police cars exceeds that of ambulances. With respect to her suggestion that people own their own defibrillators, he advised that high-risk patients do in fact have this device available to them in their homes and family members are trained to operate it. He emphasized the importance of the integration of this device with other elements in the chain of survival.

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Councillor Davis referred to the short-fall of between $7-10M that the province should have been investing into Ottawa-Carleton, noting the legislation allows for 50% cost-sharing. In view of the financial support being provided to other municipalities and the fact that overall, the Region has been short-changed $35M worth of health care through ambulance service over the past several years, she wondered whether the Region should pursue this with the province for legal recourse and financial compensation for this shortfall. The Regional Solicitor, Ms. A. Taschereau-Moncion explained that the Region could not do that simply because there is no set definition of "approved costs" as the province sets the cost and the municipality pays. She added that through statute it would be very difficult to state that the province has a clear legal obligation to pay 50%. The Councillor recalled however, that the precedent has been set in other municipalities and if there is a certain amount of money allocated in health care, that should be allocated in an equitable way. She wondered whether there have been other cases where the province has been challenged in a legal way and while the Solicitor was not aware of this, she stated that the issue is to press them for a definition of "approved costs". The Councillor believed there was a need to do some lobbying at the provincial level to ask for a change in the Act that allows the Region to have a clear definition in terms of the cost.

With respect to the issue of approved costs, Chair Chiarelli interjected that it would depend on how the province perceived the system being recommended, i.e., whether they saw it to be a 'Cadillac' service. Dr. Fitch advised committee that what is being proposed is not a "Cadillac" system, but is the bare minimum required to achieve the survival rates. It is designed to help the Region meet minimum North American standards.

Councillor Byrne requested the list of community centres where PADs are recommended to be located. Dr. Cushman advised that all community centres will be equipped with these units. Chair Munter suggested that since there are 119 units being recommended for all community centres, arenas, pools and recreation complexes, perhaps staff could break down that number by ward and provide that information to members of Committee.

Councillor Kreling inquired what lead time the municipality requires to start ordering ambulances and training people in order to stay on target. Dr. Jack Morash of Fitch & Associates, advised that the purchase of ambulances must be made by 1 December 2000 and there are a number of pieces of equipment that require the same lead time. He noted, however, that the entire schedule shows growth continuing through the three-year process. With respect to personnel resources, he advised that at this time, basic-level as well as advanced level paramedics are already in training, adding that it takes two years to train a basic level paramedic, plus an additional 6 months after that. In reply to a request from

clarification from Councillor Kreling, Mr. Morash confirmed that the lead time is usually 90-120 days from the time the manufacturer receives the purchase order to delivery.

Dr. Justin Maloney opined that the questions raised by Committee members about PADs are not applicable to the model being examined for Ottawa-Carleton, because that system will focus on trained providers such as lifeguards and security guards. These individuals will also be trained to activate the EMS system. In response to the request of Councillor Byrne, he indicated that he had a list of the community centres where PADs would be located which he would make available to committee members. He referred to his submission previously distributed to Committee which included statistics illustrating long response times and a system that has been in malaise for a long time. He did not believe the RMOC or the Ministry of Health (MOH) ignored these statistics because the analysis at the time described an EMS system that was under-funded, understaffed and was in need of better training and equipment. Both the Region and the MOH focused on training and equipment: the Region funded defibrillators for area firefighters and the MOH trained the advanced paramedics. Both of these services have been working very well.

With respect to emergency services, the chain of survival speaks of 9-1-1, CPR, defibrillation and paramedics, which are services that have to be available. In front of each of those links in the chain of survival however, is the word "early" and up to now, efforts have been focused on bringing the services up to a modern standard. The task is only half completed, but the Fitch report details how to offer the services with the urgency that makes them clinically and cost-effective. Dr. Maloney stated that a lot of effort has been invested in the local EMS system and now the Region is faced with assuming the responsibility for the service. He believed the proposals contained in the Fitch report will address the concerns of long response times and an ambulance dispatch that is currently not safe. He encouraged committee to proceed now with the report recommendations.

Mr. Wayne Currie, City of Windsor, noted that in the City of Windsor, the issue of low survival rates among persons with sudden cardiac arrest was examined and a cardiac care community program was implemented. Defibrillators were promoted in the community, to educate the public and to train staff in the institutions where the machines are placed. He noted that the general public have been encouraged to use the devices.

Mr. Currie noted that there a public education campaign was undertaken to inform non-traditional users on how to use the device. He added that the machines are very easy to use and provide both visual and verbal prompts. The City of Windsor held a number of mass training events to train the general public on the use of machines.

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Mr. Steve Ellis, representing MedTronic Physio Control, made a brief demonstration of the defibrillator, focusing on its ease of use and simple instructions. He noted that the machine provides a diagnosis of the patient's condition and evaluates whether a shock is warranted. A shock will not be administered unless the patient requires one.

Chair Chiarelli inquired whether there will be any legal liability exposure for the Region in using the PAD's. Ms. Taschereau-Moncion, responded that with an appropriate agreement in place and proper training, the liability for the Region will be minimal.

In response to a question from Chair Munter, Dr. Cushman confirmed that the medical panel conducted a medical evaluation of the defibrillators on the market place and made a recommendation on the preferred device.

In reply to a query from Councillor Davis, Mr. Ellis stated that the discount will be made available to private and community groups for 6 months from the date of order.

Chair Chiarelli questioned whether the Fitch & Associates report was prepared with input from the Transition Board. Ms. Yelle-Weatherall confirmed that the Board is aware of the details of the Fitch recommendations, however has not provided input on the short term action plan or public access defibrillator program. She added that Fitch & Associates are in favour of these two items in principle, but would like the opportunity for detailed review.

Chair Chiarelli inquired whether the Transition Board is likely to support the report. Dr. Cushman responded that the system design was prepared by the consultant retained by the Transition Board, and the short term action plan is an outstanding item that the Board is aware of, however the new issue is the public access defibrillators. He added that this is an important component of the new system, and needs to be addressed by the Transition Board.

Mr. Michael Dumbrell, representing Ottawa HeartSafe, commended Dr. Cushman on the report, and the leadership shown by Committee. He emphasized the importance of placing defibrillators in public places. He noted that Ottawa HeartSafe was established to place these machines in public places and train people on their benefits. After a cardiac arrest, the likelihood of survival drops by 10% each minute that passes, so PAD's are significant to patient survival.

Mr. Dumbrell requested that Committee consider requesting that the discount period for purchase of PADs be expanded to include the number of units, rather than solely the 6 month time period to permit adequate time to raise money to purchase between 50 and 100 units.

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Mr. Dumbrell suggested that funds be allocated for training staff in private establishments to increase placement of the devices in the private market.

Councillor Byrne suggested that these devices be placed in the offices of large employers and the government, and suggested that the Region encourage the private sector to get involved.

In response to a question from Councillor Davis, Mr. Dumbrell noted that Ottawa HeartSafe has been a grass roots organization and requires a concerted volunteer commitment and additional fundraising assistance. He added that he would like to see PADs installed in all shopping centres and office buildings, with trained staff to operate them.

Mr. Greg Birch and Ms. Suzanne Bruneau representing Agilen Technologies, manufacturer of the Heartstream defibrillator made a presentation to Committee. She expressed concern that Agilen Technologies was not asked to bid or contacted on the new system design. She noted that the two tenders/proposals presented by Agilen were not responded to, and inquired why Medtronic was dealt with directly without consideration to other companies.

Dr. Cushman drew Committee's attention to the draft medical report reviewing the selection of an automatic defibrillator. He noted that the grounds for comparison were equal on price, technology and hardware, however the issue of service and training were a concern for one of the companies.

Dr. Justin Maloney noted that the comparison of the two machines were very similar, although there has been a problem with Laerdal, the company who services the Agilen defibrillators. The medical community has expressed significant concern about the way problems have been addressed by Laerdal, and have in fact complained to Health Canada. The medical community in Ottawa-Carleton has expressed great concern about entering into a relationship with Laerdal.

Councillor Davis stated that what the delegation was saying was that this firm was precluded from being asked to submit a bid on the basis of their service performance in the past. Normally in the tendering process there would be a list of qualified suppliers as well as a review panel to set the criteria and to establish performance measurements, and she wondered at what point the Purchasing Department got involved, if at all. Dr. Cushman advised that there was an evaluation which determined the best decision from an independent medical point of view.

Councillor Davis thought that determining which is the best equipment comes into play *after* the bidding process and that is when analysis of that equipment should be conducted. She expressed concern that

staff have jumped a step in this process and suggested that if there are other suppliers that could be looked at to maintain the integrity of the public contracting process, all qualified companies should have an opportunity to bid on the tender. According to the presenter, the Region has precluded a supplier from coming forward. She questioned whether their documents were considered in the tender process or whether they were disqualified.

Dr. Maloney explained that there are three defibrillators on the market, two of which have a presence in Canada. If the Region purchased the HeartStream model, it would be serviced and marketed by Laerdal. The Region has had significant costs associated with Laerdal over the last three years with some safety issues. He stated that the Medical Panel provided an evaluation from a strictly medical point of view.

Councillor Davis stated that if there had been problems in the past, normally there would be letters on file to show a pattern of dispute with the company and if so, it is quite valid to remove a company if it has not lived up to its obligations. She questioned whether the company in question was given notice to that affect and Dr. Maloney indicated that if there were any short-cuts taken, it is perhaps based on the medical knowledge that hospital staff would not support Laerdal. Dr. Cushman noted that with respect to the Councillor's concerns about administrative problems or technical issues, he agreed that staff may not have paid as much attention as they should have to some of the contracting issues. He was prepared to look into this particular aspect, however he was quite comfortable with the professional opinion on this.

Chair Chiarelli stated that he did not believe that the Medical Officer of Health and other administrative staff are going to make a decision that they are not prepared to live by. Therefore, the committee should follow the advice of Dr. Maloney and Dr. Cushman to go with one particular company. He believed that Councillor Davis was referring to a technicality of clearing it through the purchasing process because what we're saying is that there is only one company the medical profession is prepared to live by in this community.

Councillor Davis reiterated that if there are service concerns about a particular firm, there should have been some history of those concerns on file. Dr. Maloney stated that the medical community has gone to Health Canada with complaints about this company and a nation-wide alert has been issued based on that complaint.

Ms. Bruneau stated that Laerdal is a distributor of the defibrillators which Agilen manufactures. The issues that Dr. Maloney refers to that happened with Laerdal Medical Canada were for the HeartStart 3000, that Agilen Technologies and Hewlett Packard had nothing to do with. The product that Laerdal

sells today is the HeartStream 4 Runner (labelled HeartStart FR). The issue of Laerdal not being allowed to participate in the tendering process, was not brought to the attention of Agilen Technologies; they learned from a manufacturers representative in the city that the Transition Board did not want to a bid from Laerdal. She added that their request to have a meeting to discuss the issue was declined and they were not given the option to present their technology to the Committee.

Mr. Randy Caverly, OPSEU, advised that the paramedics endorse the report. He stated that since 1997, the paramedics have come before committee putting forward presentations on this issue. He was glad to know there is an independent credible voice in the form of a consultant making representations supporting what paramedics have been saying for the past decade and he believed the issue as presented endorses many of the concerns they have raised. He stated that it is obvious increased resources are needed and that the workers providing the service to date have been working very hard. Mr. Caverly expressed the hope that the Region would deal with the issue of dispatch, rather than leaving it up to the Transition Board to decide. He indicated that other communities have contracts in place, which they believe is a necessary part of this program and they are confident that given the opportunity, they can provide the same service.

In reply to a question from Councillor Davis, Mr. Caverly replied that he believes the workers are still committed to the community; they are simply waiting to see what kind of system evolves. He believed that most paramedics are optimistic that when that time comes, they will be able to make a decision to remain in the community; and they are prepared to work through this transition phase.

With respect to the delegations' comment about the preference to work with the Region and not the Transition Board, Councillor Loney questioned what rights the Region has about possibly negotiating a contract with ambulance workers at this stage. Mr. John Kearney, Manager, Labour Relations advised that the Region is in charge at this stage. Chair Chiarelli advised that he would be putting forward several Motions which in part address this particular issue.

In discussing the report, Chair Chiarelli stated that the Region is looking at the whole issue of ambulance services as part of an emergency response system, including the issue of defibrillators and the short term action plan. As the consultant to the Transition Board, he questioned whether Dr. Fitch is of the opinion that the use of PADs are an important component of the overall emergency response system. Dr. Fitch advised that early defibrillation is a fundamental element of any modern EMS system.

The Regional Chair proposed four amending motion to the motions outlined in the report. Chair Chiarelli stated that it was quite clear that the Region, as the upper tier level of government, is designated by law to put together the new service for January 2001. That being the case, it has the legal

obligation for the system design and for the financing of the system. In response to some of the concerns raised, he explained that the interface with the Transition Board is one of giving approval on the financing of this service, keeping in mind that it will be implemented from within existing budgets.

In terms of the Transition Board and the matter of dispatch, Councillor Loney inquired about the status of the various municipalities outside Ottawa-Carleton endorsing the design. Ms. Yelle-Weatherall confirmed that the Minister of Health supports transfer of the responsibility of dispatch from the Sisters of Charity to the new City of Ottawa, if approval is received from the neighbouring county councils. Staff have met separately with those counties and together with the Sisters of Charity and a Ministry representative at which time the provincial representative announced that effective 1 January 2001, Leeds and Grenville and Lanark County would be dispatched from Kingston. However, staff have received county support from Prescott-Russell and the City of Cornwall, which has been designated by the Minister of Health to provide ambulance service for Stormont, Dundas and Glengary, support the partnership with the City of Ottawa and it is expected that their council will approve a resolution to this fact next month. She was confident the Region will get approval from the two remaining county councils.

In view of this and with respect to the amending motions introduced by Chair Chiarelli, Councillor Loney wondered what the Region would be asking the Transition Board to do. Chair Chiarelli clarified that there were extensive briefings provided to the Transition Board about the Region's request for dispatch and the Chair of the Board was able to obtain a commitment from the province that the Region can have it, with the co-operation of the surrounding counties. Therefore, the Chair opined, because the Board Chair has had that level of support and that success up to this point in dealings with the province, he believed the Region should encourage him to continue that effort to obtain dispatch.

Councillor Loney suggested therefore, that the motion be amended to include an operative clause that the Board Chair continue his leadership in helping the Region to get 50% of the total cost of the system, including dispatch, and include comment to the effect "with 100% provincial funding as previously agreed".

Moved by Chair Chiarelli

That Community Services Committee recommend Council:

1. **Receive the update on the new ambulance / paramedic service including the system design report conducted by Fitch & Associates;**

Extract of Draft Minute
Community Services Committee
20 July 2000

2. **Approve the system design strategy to increase the ambulance fleet by 55%, increase paramedic staffing by 50%, increase the peak deployment of ambulances by 29% in high-density areas and quadruple the peak deployment of ambulances in low-density areas;**

3. **Approve the budget estimates to implement the system design commencing 1 January 2001 and approve the attached high-level system design and its goal to cut high-density response times between 4:46 and 9:04 minutes and low-density response times between 1:10 and 12:38 minutes;**

4. **Support the Ottawa Transition Board in its efforts to secure 50% provincial funding for these expenditures, as the funding of the ambulance service was promised to be 50/50 provincial-municipal by the Minister of Finance in 1999 and work with other regions and counties in Ontario on a priority basis to secure the necessary 50/50 funding;**

5. **Approve the implementation and associated funding of $1.97 million for a Public Access Defibrillation Program, based on North American best practices and designed to increase cardiac arrest survivor rates;**

6. **Direct staff to accept the Ministry of Health and Long-Term Care's revisions to the short-term action plan to bolster service between 15 August 2000 and 31 December 2000, with a total expenditure of $780,000, with the balance of $1.02 million previously approved for the short-term action plan be allocated to public access defibrillation;**

7. **Approve:**

   a) **The system design and the additional capital funding for the start-up plan, short term action and PAD program of $8.729 million;**

   b) **An addition to the 2000 Operating Budget of $1.991 million;**

   c) **That the Finance Commissioner be directed to identify alternative funding sources for the amounts identified above prior to the Council consideration of these recommendations;**

8. **Whereas the applicable legislation requires Regional Council to designate, by September 3, 2000, the deliverer of ambulance service that will commence operation on January 1, 2001, Committee recommends that Council confirm the establishment of an in-house system, as per the attached system design;**

9. **Whereas the Transition Board, has been very successful in its attempt to gain Ministry approval for the transfer of dispatch, subject to the approval of surrounding Counties; THAT the Board be requested to continue its leadership on dispatch through to finalizing authority for a unified dispatch system to be financed 100% by the Ministry of Health, as has been previously committed by the Ministry;**

10. **WHEREAS the staff persons required to create the recommended management structure for the new service will need to be regional employees prior to the creation of the single city; RESOLVED THAT the new staff will take joint direction from the Medical Officer of Health and from the new city's General Manager of Protective Emergency Services;**

11. **THAT Committee recommend Council requests that the capital allocation and operating allocation for EMS upgrades, PAD program, and short term action plan, the funding for which have been identified within Regional resources, be approved by the Transition Board by August 20, 2000 in order to allow the necessary staffing and investments in equipment to proceed on an urgent basis.**

CARRIED as amended