1. INDEPENDENT AUDIT OF AMBULANCE RESPONSE TIMES

COMMITTEE RECOMMENDATIONS AS AMENDED

THAT COUNCIL advise the Minister of Health that the Regional Municipality of Ottawa-Carleton is prepared to take on the responsibility for ambulance service in Ottawa-Carleton and wishes to work cooperatively with the Ministry of Health to resolve the outstanding issues, specifically, the need for local control of dispatch and the need for adequate financial resources to deliver this service; and,

THAT COUNCIL request that the Province appoint a mediator, who would work with the Region and the Ministry to satisfactorily resolve these matters; and,

<u>FURTHER THAT this resolution be circulated to Ottawa-Carleton M.P.P.s the</u> Association of Municipalities of Ontario and to the neighbouring county councils.

DOCUMENTATION

- 1. Medical Officer of Health report dated 10 Nov 98 is immediately attached.
- 2. Extract of Draft Minute, Community Services Committee 19 Nov 98 immediately follows the report and includes a record of the vote.

REGION OF OTTAWA CARLETON

RÉGION D'OTTAWA CARLETON

REPORT RAPPORT

Our File/N/Réf.

Your File/V/Réf.

DATE 10 November 1998

TO/DEST. Co-ordinator

Community Services Committee

FROM/EXP. Medical Officer of Health

SUBJECT/OBJET INDEPENDENT AUDIT OF AMBULANCE RESPONSE TIMES

DEPARTMENTAL RECOMMENDATION

That Community Services Committee recommend Council receive this report for information.

PURPOSE

The purpose of this report is to explain the "response time" results of the analysis of the 1997 ambulance raw call data for the Region of Ottawa-Carleton (ROC).

BACKGROUND

One of the most important things to anyone who calls for an ambulance in an emergency situation is how quickly the ambulance arrives. In the industry, this is call "response time" and is considered a basic and essential measure of performance.

An independent consultant with extensive emergency medical services credentials was retained to conduct a response time analysis of the Ministry of Health's 1997 raw call data for the Region of Ottawa-Carleton.

The results reveal very serious issues regarding response times for high priority emergency calls in our region. The analysis indicates that even in urban areas the response time is considerably higher than it should be. The results of the independent consultant's analysis are described in detail in this report.

A letter to the Honourable E. Witmer, Minister of Health, expressing grave concern about the current level of service and requesting immediate control of dispatch and additional funds was sent by Regional Chair, Bob Chiarelli on 9 November 1998. A copy is in Annex A.

METHODOLOGY

The 1997 raw call data for Ottawa-Carleton included 112,737 Computer Aided Dispatch (CAD) records for 1997 activities at the Central Ambulance Communications Centre (CACC). These records included all ambulance calls originating or terminating within the Region of Ottawa-Carleton, as well as those handled by ambulances physically stationed within the Region, regardless of pickup location. The records include all emergency and non-emergency calls, as well as transactions completed for ambulance stand by and administrative assignments. The number of records and their general distribution are consistent with previous MOH summary reports, and therefore suggest no omissions of data. Annex B illustrates a summary of the analysis of the raw call data and a description of codes or classes used for ambulance calls.

The analysis was conducted using generally accepted principles and analytic practices. The purpose of the analysis was to:

i. document and understand the existing level and demand for services in our region, and ii. assist in the development of a new land ambulance system for 1 January 2000, which is the time specified for the Region of Ottawa-Carleton to assume full responsibility for this service from the Province.

In general, two forms of analysis were performed for this report. First, the data was sorted by geographic area, including by lower tier municipality, and by kilometre square across the Region. Second, within each area, call volumes, patient tallies and response time performance were established for all codes or classes of calls. Several other operational metrics were calculated such as the time to complete an emergency call from call receipt to clearing the receiving hospital. The analysis performed on raw call data is illustrated in Annex C.

In cases where more than one ambulance was sent, the recorded response time was taken to be the response time of the first ambulance to arrive at the scene. This is in keeping with standard industry practice, and prevents the distortion of response times by later arriving vehicles.

A map illustrating 5 km x 5 km squares detailing response times to life threatening emergencies (code 4) is shown in Annex D.

In order to have a clear understanding of the issues addressed in this report it is imperative to understand the variations in the applications and definitions of certain performance measurement criteria such as "response time".

i. Response Times

This is a complex issue because the different definitions of "response time" produce widely varying results, and major differences in clinical performance. Accordingly, the rigorous and clinically defensible definition that provides the fullest disclosure has been applied to the 1997 raw call data for the Region of Ottawa-Carleton.

The definition of "Ambulance Response Time" used by the consultant for this analysis is: the time between the ambulance dispatcher's first contact with the caller and the arrival of ambulance at the address of the call.

Ambulance CAD systems routinely capture the time that a dispatcher starts entering information about a call. The Ministry of Health's CAD system records the time of the dispatcher's first keystroke of date entry as "time zero", and this is the time that has been used as the starting point for all Ambulance Response times reported in this document. Details on time entry points are listed in Annex E.

Emergency response time reporting is a particularly good example of the importance of comparing apples to apples for benchmarking purposes. Some emergency agencies report their "response times" as shortened segments of actual response times. For instance, many Canadian fire departments report "response times" as the time between notifying a fire station of a call, and the arrival of the fire truck at the address. In other words, the time from which the person with emergency initiates the call, to the time that it is delivered and taken by the fire department is not counted in fire department response time reporting. As is explained later in this report this is a significant amount of time. Some police agencies in Ontario report "response time" as the time between receiving a call and the time an available police car can be found to accept the call.

All of the "partial response times" produce optimistic values which mask portions of the actual response time. In the interest of the citizens of Ottawa-Carleton the Region will always use the above definition of "ambulance response time".

ii. Fractile vs Average Response Times

The Region of Ottawa-Carleton supports the use of 'fractile' response time reporting and not the use of 'average' response time reporting.

All response times in this report are reported at the '90th percentile'. This means that 90% or 90 out of 100 of the calls included had a response time of the reported value or less. For example, a response time of 9.8 minutes at the 90th percentile means that nine out of ten calls had an ambulance arrive at the address in 9.8 minutes or less after the first keystroke of data entry by the ambulance dispatcher. Fractile response times at the 90th percentile is a widely accepted industry standard benchmark.

Although the use of fractile response times has been adopted by the MOH for operational standards set in the Regulations to the *Ambulance Act* (eg.Sections 42 and 56), the MOH's Central Ambulance Communications Centre for Ottawa-Carleton refers to response times for our region using average response time reporting.

Averages report the response times experienced by roughly half of the customers. For instance, an average response time of 9.8 minutes means that about half of the response were less than 9.8 minutes, and half were more. Average response times do not convey the response times for the half that were more than 9.8 minutes. For example were they responded to in 10 minutes, 13 minutes, 18 minutes or possibly more?

Like most modern ambulance services, the Region of Ottawa-Carleton will not use average response time reporting when it assumes full responsibility of ambulance services because it paints a very optimistic picture, one which distorts the reality experienced by at least half of patients, those for whom the response times were longer.

To assist in the understanding of the differences between the two methods, a comparitive example using fractile and average response times is shown in Annex F. The table illustrates the impact of the different response time reporting mechanisms.

DISCUSSION

ANALYSIS

The review of the 1997 call data received from the MOH revealed serious issues regarding response times to high priority emergency calls in the Region of Ottawa-Carleton. Even in areas which should be the easiest to serve (the urbanized core), response times are between five and seven minutes longer than those seen in industry leading ambulance systems.

Ambulance response times of less than 8 minutes and 59 seconds at the 90th percentile are considered 'the gold standard' against which urban ambulance systems are benchmarked.

In the Region of Ottawa-Carleton's urban core, life threatening emergency call (code 4) response times run from approximately 14 to 16 minutes at the 90th percentile. In fact, only three square kilometers of the entire Region have response times under 11 minutes at the 90th percentile, and even in the best served area (Nepean), only 56% of calls have response times of 9 minutes or less.

While there is no information available as to how well other communities in Ontario (except for Toronto) are doing, Regional staff found, through the best practices review conducted late this summer, that the City of Calgary's goal for 1997 was: 8 minutes or less response time at the 90% percentile. In 1997 the City of Calgary achieved 8 minutes or less at the 87th percentile. By comparison the City of Toronto presently provides a response time of less than 8 minutes 59 seconds to about 85% of life threatening emergencies. Annex G shows response times to emergency calls for Ottawa-Carleton by lower tier municipality.

It is important not to understate the impact of these deficiencies on survival rates in the Ottawa-Carleton community. The Base Hospital program reports that in 1997, in the Ottawa-Carleton urban area, 5.4% of people survived out-of-hospital cardiac arrest. These are discouraging numbers, but not unexpected given the long ambulance response times. Medical research clearly indicates the importance of response time in the 'Chain of Survival'. Delays in the arrival of Paramedics dramatically reduce patient survival from a medical crisis such as cardiac arrest. Annex H illustrates the Chain of Survival and Annex I includes a letter from Dr. Justin Maloney, Director Base Hospital Program..

The analysis of the data also revealed that a contributing factor to these long response times is the length of time for the dispatchers to notify an ambulance of an incoming emergency call. The dispatch process time for the highest priority calls is 3.8 minutes at the 90th percentile. These results fall short of the MOH's own standard of two minutes at the 90th percentile as described in Section 56 of the Regulations of the Ambulance Act. In other words it takes the dispatch centre

almost twice as long to send out an ambulance as it should. In 1997, the MOH's Ottawa dispatch centre met this standard on only 62% of life threatening emergency calls within the ROC. Annex J illustrates the dispatch centres call handling times.

Response times in rural areas are even more challenging, as call volumes are very light. In many areas, only a few emergency calls arise in an entire year. However, deployment improvements can certainly have some impact on the times which range up to more than half an hour at the 90th percentile. While recognizing the vital importance of Tiered Response, Regional Land Ambulance Health Services staff will review other options for the rural areas for the year 2000 including: ambulance first responder units, community based response teams, volunteers and others which may assist by providing some measure of patient support prior to the arrival of an ambulance. It is important to state that response time criteria has a price tag that varies. Some of the variables that affect the price include: call volume, population density and geographic location. Particular attention to medical referral patterns (call location, types of calls etc...) will be key in developing the new system.

Improving response times, although beyond the scope of this report, will likely require some combination of:

- Improved dispatch call handling (will be addressed in a performance based system but may involve higher skill requirements as hiring criteria, more staff training and better technology)
- Improved ambulance deployment operational practices
- Increased numbers of ambulances covering the Region of Ottawa-Carleton
- More ambulances at specific time points

PUBLIC CONSULTATION

While extensive public consultation continues on Land Ambulance Health Services in general, no specific consultation was undertaken for this particular report and data analysis. However, there will be extensive consultation on response time levels of service in the near future as staff develop standards for Regional Council's consideration for the new ambulance systems in the year 2000.

FINANCIAL STATEMENT

Regardless of who runs the ambulance system it is obvious that more funds are required in this downloading from the Province to the Region of Ottawa-Carleton. It will take money and a transition period to reach the industry standard. In addition, the hospital restructuring will likely result in increased costs as a result of more inter-facility transfers. Staff are currently reviewing the options and have begun discussions with stakeholders.

CONCLUSION

While the analysis by the independent consultant describes last year's performance, no major organizational changes have occurred and so it is likely that performance for 1998 will be similar to that provided by the MOH in 1997. If the MOH agrees to provide the raw call data for 1998 the analysis could easily be repeated.

Poor response times have an immediate impact on survival rates for the residents and visitors in the community. If the Region of Ottawa-Carleton is to improve the ambulance services, beginning in the year 2000, the Ministry of Health must immediately agree to include the full control of dispatch and additional funds in the downloading formula to bring the level of service to the standard the MOH itself has determined as described in the *Ambulance Act*.

Approved by Robert Cushman

Region of Ottawa-Carleton 7th Floor, 495 Richmond Road Ottawa, Ontano K2A 4A4

Health Department Land Ambulance Services Tel. (613) 560-6053 Fax. (613) 724-4124



Région d'Ottawa-Carleton 495, chemin Richmond, 7e etage Ottawa (ON) K2A 4A4

Service de la Santé Services d'ambulance terrestre Tél. (613) 560-6053 Télécopieur (613) 724-4124 ANNEX A

6 November 1998

File: 03-98-0016

The Honourable Elizabeth Witmer Minister of Health 10th Floor, Hepburn Block 80 Grosvenor St. Toronto, ON, M7A 2C4

Dear Minister Witmer

Re: Land Ambulance Response Times in the Region of Ottawa-Carleton

Thank you for the 1997 land ambulance raw call data received on 16 October 1998, for the Region of Ottawa-Carleton.

An independent consultant with extensive emergency medical services credentials was retained to conduct an analysis of the raw data. The purpose of the analysis was to document and understand the existing level and demand for services in our Region and to assist in the development of a new land ambulance system for 1 January 2000. The consultant used the rigorous and clinically defensible definition of "response time" that provides the fullest disclosure in his analysis of 1997 data for the Region of Ottawa-Carleton provided by your Ministry. This definition was the time between the ambulance dispatcher's first contact with the caller and the arrival of the ambulance at the address of the call.

The results reveal very serious issues regarding response times for high priority emergency calls in our Region. The industry benchmark for an urban high priority emergency response time is 8 minutes and 59 seconds or less. The analysis conducted with Ottawa-Carleton's raw data indicates that even in urban areas the response is considerably higher than it should be. For instance in the City of Ottawa the response time is 14.43 minutes at the 90th percentile. The analysis further showed that the length of time the dispatcher takes to notify an ambulance of an incoming emergency call at the 90th percentile is almost twice as long as the Ministry standard as described in Section 56 of the Regulation to the Ambulance Act, as was in effect in 1997.

The impact of these deficiencies on the quality of life for the Ottawa-Carleton community cannot be understated and needs to be addressed immediately.

The Region of Ottawa-Carleton accepts its responsibility for full service provision of land ambulance services in the year 2000. It does not however accept the current very poor service provided by your Ministry. This new information very clearly demonstrates the fact that the Region of Ottawa-Carleton has been downloaded an inadequate service, insufficient funds, and once again highlights the critical importance of including Regional control of the ambulance dispatch process when the program is downloaded.

Your Ministry must rectify this situation immediately to provide the citizens and the visitors to the Nation's capital region with the level of emergency ambulance services they are entitled to. Furthermore, it is clear that additional funds must be added to the calculation for the cost of ambulance service in the downloading process.

Your urgent attention to this matter is requested. I look forward to hearing from you.

Bob Chiarelli

Chair, Region of Ottawa-Carleton

ANNEX B

Summary 1997 Raw Call Data Analyzed

<u>Description</u>	Number of records
Total records provided	112,737
Pickup locations outside ROC	(16,115)
Calls with pick up location within ROC	96,622
Non-patient related priorities (7,8,9,0)	(28,171)
Calls included in final analysis	68,451

Code Definitions

	Code (O•	Administrative	duties
ı	Loae () '	Administrative	annes

Code 1: Deferrable non-patient transfer

Code 2: Scheduled patient transfer

Code 3: Emergency, non life threatening, patient in stable condition

Code 4: Emergency, life threatening, patient unstable

Code 5: Obviously dead

Code 6: Legally dead

Code 7: No patient carried Any call where a patient is not transported e.g. a call where

patient care is provided but the patient declines transport, or a call is cancelled

prior to arrival at scene.

Code 8: Standby, ambulance relocated to balance coverage

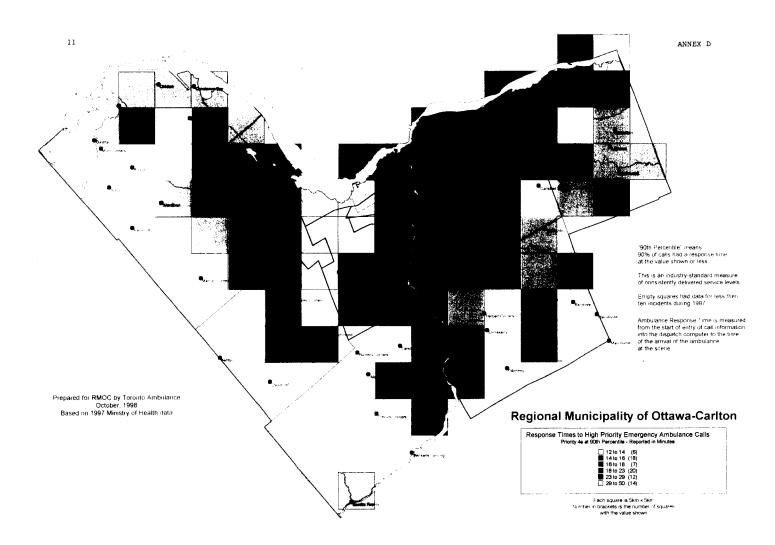
Code 9: Vehicle is out of service for maintenance

ANNEX C

Analysis Performed on 1997 Raw Call Data

For each lower tier municipality, one and five kilometre square, the following data was established:

- Number of Calls by each Priority 1,2,3,4 and 8
- Number of Patients transported from each of Priority 1,2,3, and 4 calls
- Response time at the 90th and 50th percentile for Priority 4 calls
- Average response time for Priority 4 calls
- Response time at the 90th and 50th percentile for Priority 3 calls
- Average response time for Priority 3 calls
- Response time at the 90th and 50th percentile for Emergency Calls combined
- Average response time for Emergency Calls combined
- Call duration at the 90th percentile for emergency calls
- Call duration at 50th percentile for emergency calls
- Average call duration for emergency calls
- Call duration at 90th percentile for non-emergency calls
- Call duration at 50th percentile for non-emergency calls
- Average call duration for non-emergency calls
- Number of call with destinations outside the Region of Ottawa-Carleton

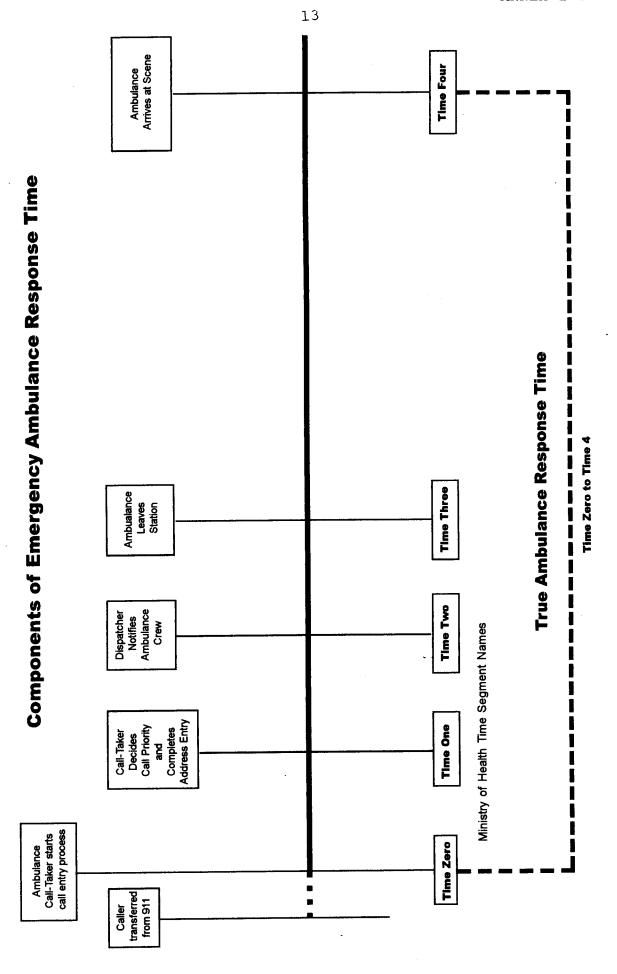


ANNEX E (1)

Time Entry Points

Data for each call included, among others, the following essential time stamp fields:

- Time 0 Time of first keystroke of data entry by the call taker
- Time 1 Time call taker has determined address and priority of call
- Time 2 Time dispatcher notified the responding ambulance of the call
- Time 3 Time the ambulance reported they were en route to the call
- Time 4 Time the ambulance reported they had arrived on scene
- Time 5 Time ambulance departed the scene for hospital
- Time 6 Time ambulance arrived at hospital
- Time 7 Time ambulance clear the receiving hospital



ANNEX F

Impact of Fractile vs Average Response Times Reporting for a Sample Area in the Region of Ottawa-Carleton

Method of Calculation	Resulting	Variation from
	"response time"	True Response
	value	Time
True Ambulance Response Time at 90 th Percentile	11.85 minutes	0.0
True Ambulance Response Time - Averaged	8.26 minutes	-3.59 minutes

1997 Ambulance Response Times to Emergency Calls in the Region of Ottawa-Carleton

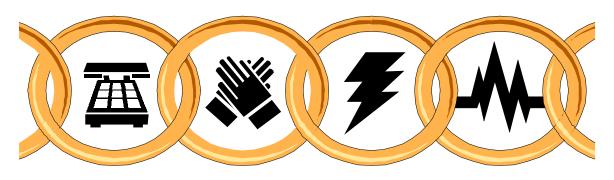
	High Priority -	(Code 4)	Non-Life	(Code 3)	All	(Codes 3 & 4)
	Life		Threatening		Emergency	
	Threatening		Emergencies		Calls	
	Emergencies				Combined	
Area Municipality	Response Time	Total	Response Time at	Total	Total	Response
	at 90 th	Responses	90 th Percentiles	Responses	Responses	Time at 90 th
	Percentile		(Minutes)			Percentiles
	(minutes)					(Minutes)
City of Nepean	13.58	5,347	25.98	2,976	8,323	19.02
City of Ottawa	14.43	18,827	28.30	11,530	30,357	21.58
City of Gloucester	15.60	3,199	26.95	1,718	4,917	21.23
City of Kanata	15.83	691	24.55	278	696	18.12
Village of Rockliffe Park	16.10	38	35.27	23	61	31.40
City of Vanier	16.12	1,300	31.40	772	2,072	22.97
Township of Goulbourn	17.37	623	25.72	274	897	20.92
Township of Cumberland	18.22	1026	26.88	463	1,489	21.38
Township of Rideau	22.18	382	29.67	158	540	24.33
Township of Osgoode	22.50	532	27.18	171	703	24.12
Township of West-Carleton	30.42	440	39.62	114	554	32.50

Notes:

- industry -standard measure of consistently delivered service levels. Averages are not used as they report the response times for only roughly 1. "90th Percentile means that 90% of incidents had a response time for the first arriving ambulance of the value shown or less. This is an half of incidents.
- For the purpose of establishing incident response times, only the response time for the first arriving ambulance is considered for each incident. Totals may from other tables due to presence or absence of data in Ministry of Health fields such as time of arrival on scene
 - Source: Ministry of Health computer aided dispatch system 4. v.
 - Shown by area municipality in which incident occurred.

ANNEX H

Chain of Survival



Early Access Early CPR Early Early
Defibrillation Advanced Care



The Ottawa | L'Hôpital Hospital d'Ottawa

November 9, 1998

General Campus Général

501 Smyth Ottawa, Ontario K1H 8L6

(613) 737-8999

Fax: 737-8008

Ms. Joanne Yelle-Weatherall, Director

Land Ambulance Service

Regional Municipality of Ottawa-Carleton

Health Department 495 Richmond Road Ottawa, Ontario

K2A 4A4

Base Hospital Program Ottawa-Carleton

Programme de base hospitalière Ottawa-Carleton

Dear Ms. Yelle-Weatherall:

Further to your request, please find attached a description of the "Chain of Survival", and the status of each link in the chain in Ottawa-Carleton.

Sincerely,

Justin Maloney, MD Medical Director

JM:pcm

Enclosure:

Weatherall.

Chain of Survival

A large body of research led the American Heart Association to promote a "Chain of Survival" to improve outcomes from prehospital cardiac arrests. Such a multi-system community response allows people to access the system quickly and to have the system respond rapidly with personnel who are trained and equipped to help. Outcome improves when the following sequence of events occurs as rapidly as possible:

- Early Access
- Early CPR
- Early Defibrillation
- Early Advanced Care

If any link in the chain is weak or missing, the chance of survival is lessened, and the emergency medical system is condemned to poor results.

Chart audits and follow-up by the Base Hospital Program of Ottawa-Carleton revealed that 26 people in Ottawa-Carleton (5.4% of 479 arrests) survived a pre-hospital cardiac arrest in 1997. In 1991, only 8 persons (2.4% of 342 arrests) survived.

The following achievements have been accomplished by the citizens of Ottawa-Carleton in regards to the chain of survival:

Early Access

• An enhanced 911 emergency telephone answering bureau 1988

Early CPR

- A Regional Heart Saver Committee established to co-ordinate the activity of major local CPR training agencies
- Insertion of CPR as a core curriculum subject into grade 9 of all local high schools, 1993-94.

Early Defibrillation

- Automated external defibrillators to all ambulances, 1988.
- Automated external defibrillators to all area fire departments, 1993-94.
- Public Access Defibrillation programs 1998.

Early Advanced Care

• Advanced paramedic program, 1994-95.

The common word in each link in the Chain of Survival is "Early." Ottawa-Carleton must improve the speed of each link in the Chain.

Early Access

• 911 call re-routing to ambulance dispatch and subsequent re-routing to fire dispatch centres can be improved with new equipment and policies.

 Significant overhaul of Central Ambulance Communications Centre's equipment, training, staffing, policies and procedures is needed to ensure the right level of care is provided to every patient as quickly as possible.

Early CPR

• A public education program targeting people who are at risk of witnessing a cardiac arrest (eg. 40 plus year old women, families of cardiac patients.) is needed.

Early Defibrillation

• Public Access Defibrillation programs should expand to all places where people gather.

Early Advanced Care

- Ottawa-Carleton has been promised 78 advanced paramedics. So far, 47 have been trained and another 11 are being trained. The rest should be trained as soon as possible.
- 78 advanced paramedics may not be enough.

Dr. Justin Maloney Medical Director Base Hospital Program of Ottawa-Carleton Ottawa Hospital, General Site November 1998

ANNEX J

<u>Ministry of Health - Ottawa Central Ambulance Communications Centre Call Handling</u> <u>for Priority Code 4 Emergency Life Threatening Calls</u>

Measurement	Ottawa Centre Results
At 90 th Percentile	3.8 minutes
Average	2.8 minutes
% under Two Minutes	62%

INDEPENDENT AUDIT OF AMBULANCE RESPONSE TIMES

- Medical Officer of Health report dated 10 Nov 98

The Medical Officer of Health, Dr. R. Cushman began by saying the independent report prepared by Mr. Alan Craig, Senior Emergency Services Planner, City of Toronto Ambulance Service, focuses on the quality of ambulance service in Ottawa-Carleton and substantiates the Region's two initial contentions: that the Region of Ottawa-Carleton must have control of dispatch to deliver an effective ambulance service and that the funding provided, \$12.5 million, is substantially under-costed. Dr. Cushman speculated that running a quality service will cost over \$20 million. He reiterated his support for the men and women working in the ambulance service sector, saying there have been problems from the beginning and there will continue to be difficulties as the system redefines itself. Dr. Cushman wanted to underscore the fact these are system problems, not people problems, and that the paramedics and dispatch operators are working as best they can within the existing system.

The following is a presentation made by Ms. Joanne Yelle-Weatherall, Director, Land Ambulance Services, on the findings of the independent audit:

- the report was prepared using the Ministry of Health's 1997 raw call data obtained by the RMOC in October 1998;
- the purpose: to determine the existing level of service and to prepare for the new system in the Year 2000
- response time performance is a universal, standard measure of ambulance performance which gives a good measure of the effectiveness of the system in patient care.

Ms. Yelle-Weatherall highlighted three of the many components used to measure response times:

- fractile versus average reporting
- 8:59 minutes at the 90th percentile
- importance of clock start and stop times

> She noted that all good ambulance services in North America use fractile reporting, as it clearly illustrates what happens most of the time. While the Ministry of Health supports the use of fractile reporting, as stated in Section 42 of the Ambulance Act regulations, it reports ambulance response times in Ottawa-Carleton by using averages. This is not a good measurement since it only relates what happens half the time. The acceptable standard response time in North America in urban communities is 8 minutes, 59 seconds or less at the 90th percentile. This standard is based on response times for cardiac arrest, the most serious emergency situation, where if circulation is not restored within minutes, the lack of oxygen will cause irreversible brain damage. In the 1970s researchers found there were significantly higher, out of hospital cardiac arrest survival rates if first level response (Cardio-pulmonary resuscitation CPR) was initiated within 4 minutes and if Advanced Life Support (ALS) paramedics arrived on the scene within 8 minutes. These have since become the international "gold standard" for urban ambulance systems and are supported by both the Ontario and American Ambulance Associations. In Ottawa-Carleton, in urban centres, the response time is somewhere between 13.5 and 16 minutes at the 90th percentile.

> Ms. Yelle-Weatherall spoke about dispatch call taking times. She said that Section 56 of the *Ambulance Act* regulations indicates that, for life-threatening emergency calls, it should take no more than 2 minutes to alert an ambulance crew to respond to a call, 90 percent of the time. The current dispatch response time in Ottawa-Carleton urban communities is 3 minutes 48 seconds. An important consideration is when does the clock start recording time, and it starts at different times for different people:

- for patients, it starts when the need for ambulance service is identified;
- for the dispatcher, it starts with the first key stroke;
- for fire departments on medical calls, it starts when the call is received.

Ms. Yelle-Weatherall indicated that, for the purposes of this report and for all future purposes, the Region of Ottawa-Carleton identifies response time as the time between the ambulance dispatcher's first contact with the caller and the arrival of the ambulance at the address where the call originated. She presented a diagram which illustrates the components of emergency ambulance response time, beginning with the transfer from 9-1-1 service to the ambulance arriving at the scene. The first link in the chain, the dispatch function, is the weakest, and it is imperative that Ottawa-Carleton gain control of this function in order to improve the system. In addition, technology upgrades, new policies and improved system design will be required.

Ms. Yelle-Weatherall concluded her presentation by saying two key ingredients will be required in order for the Region of Ottawa-Carleton to provide its citizens with good ambulance service at a reasonable cost, and to meet the Ministry of Health's basic principles: these are the control of the dispatch function and the requirement for additional funding. The independent audit has confirmed the position of the Medical Officer of Health at the time the service was downloaded to the RMOC.

Mr. Alan Craig began by restating there was no need to personalize any of the report's findings, as everyone involved in the ambulance business is hardworking and has a huge emotional investment, whether they are service providers or administrators. He pointed out that Ottawa-Carleton is far ahead of almost every other municipality in terms of the downloading of ambulance service and in wanting to take this opportunity to provide an excellent service; the data contained in the report should be treated as a starting point and as part of the foundation process.

Mr. Craig described the analysis as a standard base line analysis for any emergency medical system to be established, one that is run on a daily, weekly and monthly basis by every quality service in North America and beyond. The information will be a mandatory part of the Expression of Interest process to come, where it will be ascertained whether there are agencies, departments or private interests who think they can provide service delivery in the year 2000. It will be important for the proponents to know the scope of the expected work and to receive fair warning they are taking on a major metropolitan service. The analysis provides the required level of detail, as well as a benchmark all parties can look back upon saying this is where we were, this is where we are today and this is where we want to go.

Mr. Craig continued by saying the Ministry of Health supplied the data for all calls handled by the Ottawa Dispatch Centre beginning or ending in the Region of Ottawa-Carleton or handled by ambulance stations physically located in the RMOC in 1997. One hundred and thirteen thousand (113,000) records were available and analyzands ended up with approximately 70,000 records. Approximately 28,100 were excluded because they did not relate to patient care (vehicles going for gas or moving from one location to another); an additional 16,000 calls related to pick-ups outside the RMOC and a small percentage was excluded because of missing time stamps and illogical response times. In instances with extremely long time intervals, system providers were given the benefit of the doubt in very case possible.

Originally data from 1998 was requested but data from 1997 was more readily available. It was felt this would have a minimal impact since the demand for ambulance service does not shift radically from year to year in a community which is not changing shape or size at a fast rate. In addition, there have been no fundamental emergency medical service changes since January 1 therefore the results are representative of the current situation. The data provided was good, clean data, with few exclusions required.

A numerical analysis was undertaken (how many calls, how many patients arose from all priorities from non-emergency to life threatening situations): response times were an important issue. Researchers analyzed all possible intervals in every call and calls were broken down into 5 km and 1 km squares across the Region. This has generated much information for each of these areas and the data will be useful to the RMOC in the future. The analysis provided an extremely good understanding for the future system. The importance of this cannot be underestimated, as it is the foundation for the new system. Good response time mapping and good demand mapping was generated, and this speaks to how many ambulances will be required in the long term. Aside from across-border calls, the Region now has all the data it needs for systems establishment and to negotiate with the Ministry of Health.

Councillor L. Davis asked why the RMOC's response time is 3½ minutes while the standard is 2 minutes. Ms. Yelle-Weatherall indicated part of the problem is antiquated technology and the fact that paramedics may not be readily available; she reiterated there are efficiencies to be made once control of the system is obtained. Councillor Davis opined part of the problem is ambulance diversion for higher priority calls. Mr. Craig pointed out that the analysis looked at the total response time from the moment the clock starts ticking until the vehicle gets to the scene, and he agreed that diverting ambulances does add to the response time. The Medical Officer of Health, Dr. R. Cushman, expressed the hope that ambulances were not being diverted in the case of life-threatening emergency calls. He added that, in the case of a multi-vehicle accident, the first vehicle to arrive might be the second one that was dispatched, but the vehicles would have been coded from the initiation of the call to the arrival on the scene.

Councillor Davis wanted to know whether 9-1-1 operators assess the degree of emergency or whether they automatically channel calls to the downstream agencies. Mr. Craig indicated the normal practice is to refer calls to the prime agencies, fire, police and medical emergency services. He added that, in a good 9-1-1 centre, operators try to get as much information about where the patient is located to get the ambulance on its way rapidly.

Councillor Davis wondered any new technology would be year 2000 (Y2K) compliant. Ms. Yelle-Weatherall agreed this is a serious concern, however she reiterated that the system cannot be changed, and new technology cannot be introduced before staff have a definitive answer from the Ministry about the dispatch function. A. Craig added that the Y2K compliance issue will be highlighted in the Expressions of Interest document. He pointed out that all dispatch systems currently available are Y2K compliant, but he could not say whether this is the case with the Ministry's technology.

Councillor C. Doucet expressed his concern about the 9-1-1- service not having been included in Mr. Craig's research. He related a recent experience with land ambulance service where it appeared to him the 9-1-1 operator and the caller spent a significant amount of time discussing details of the accident. The Councillor said he felt this should be factored into response times for the new system. Mr. Craig noted that, from a public health point of view, monitoring how long a transfer from 9-1-1 takes is an important consideration, but this is beyond the responsibility of the Ottawa Ambulance Centre, and possibly, in this instance, the caller had already been transferred to ambulance services.

Councillor D. Beamish asked how the numbers compare to those in Toronto and whether a different kind of deployment is used. Mr. Craig replied that, as of this week, in 87% of life-threatening emergencies, ambulances arrive in 8 minutes, 59 seconds or less; this is measured from the time the phone rings in the centre since Toronto has the technology to do it. This figure is for the Metro area and response times are even shorter in the downtown area. There is no difference in the deployment scenario for 9-1-1 operations in Toronto.

Replying to a question from Councillor D. Holmes, J. Yelle-Weatherall indicated the data requested from the Ministry was provided directly to Mr. Craig and was not obtained through a Freedom of Information (MFIPPA) request. Staff have requested additional information through MFIPPA and are still awaiting receipt of much of this material. She confirmed, in response to an additional question from Councillor Holmes, that the Province was refusing to provide some of the other information requested.

Councillor Holmes asked for an update on discussions with the abutting municipalities. Ms. Yelle-Weatherall indicated that the counties of Prescott-Russell and Stormont-Dundas-Glengary are interested in partnering in any area that represents savings. The County of Renfrew's position is that the Ministry of Health should take back ambulance service therefore they are not interested in participating in any discussion. Lanark County has indicated it has a made-in-Lanark solution.

Councillor Holmes asked whether the cost of dispatch was included in the \$12.5 million figure and if not, what do staff estimate the cost will be. Ms. Yelle-Weatherall replied in the negative, adding that the estimated cost is approximately \$2.5 million, a figure provided by the Ministry. She could not say, in reply to further questions from the Councillor, how many vehicles the RMOC should have, since the system will be completely redesigned, and efficiencies will be sought.

Councillor Holmes noted that the cost of amalgamating police services in Ottawa-Carleton had been high, and she wondered whether the Ministry should be expected to pay capital costs before the Region accepts the take-over. Mr. Craig said this is a political matter that Council will need to address: clearly, the \$12.5 million is substantially low in view of the information on the current level of service and that which might meet the Medical Officer of Health's requirements.

Councillor W. Byrne asked whether the full assumption of responsibility by the RMOC included the dispatch function, or whether the Province intends to continue providing this service. Ms. Yelle-Weatherall indicated the Province maintains it will continue to control dispatch. Councillor Byrne wanted to know about the logistics of dispatch and why it was essential the Region control this function. Ms. Yelle-Weatherall reiterated the control of dispatch controls the level of service and thus controls costs. Under the current arrangement, dispatch is provided by a separate agency under contract to the Ministry of Health and the Ministry and other providers control the vehicles.

Councillor McGoldrick-Larsen spoke about having spent time at the ambulance dispatch centre as well as at the Queensway-Carleton Emergency room and at being shocked at what she discovered. She recommended other Committee members spend time with the ambulance industry to gain a better appreciation of what the transition team is trying to accomplish and she wanted those present to know that everyone she spoke to had high regard for the way the Region is approaching the issue. The Councillor asked for an update on discussions with the Ministry regarding the dispatch function. J. Yelle-Weatherall said Chair Chiarelli has written to the Minister and there is a commitment from the Minister's Office to future discussions with staff on this matter. Ministry officials have said the dispatch function would be retained.

Councillor H. Kreling asked for clarification on the Ministry standard for response times. J. Yelle-Weatherall clarified the 8 minute, 59 second standard is an industry standard, not a Ministry standard. Councillor Kreling wondered whether the recent re-tender for the Osgoode Ambulance Service had included references to the dispatch function or to response times. Mr. Craig said there had been no requirement for response times, as control over this aspect lies with the dispatch function.

Dr. Cushman noted that one of the key elements of dispatch, in addition to time sequence, is deployment. The "gold standard" is widely accepted in the North American industry and is well-known to the Ministry, to the point where it gets into the *Ambulance Act* but without rigid regulations. Dr. Cushman said this was another justification for establishing a performance-based service in Ottawa-Carleton as opposed to a level-of-effort service.

Public Delegations

Mr. Richard Lavictoire, Acting Manager, Central Ambulance Communications Centre (CACC)

Mr. Lavictoire said the CACC is aware it needs to upgrade and update its system and protocols. Since 1997 it has been awaiting the installation of new equipment such as an integrated radio-telephone system (to be in place by January 1999), a new computer-aided dispatch (Fall of 1999), a digital mapping system and additional staff. Currently staff are updating and revising all policies and procedures and are revising the way calls are taken, questions are asked.

Staff also participate on the regional committee comprised of ambulance operators and members of the ambulance centre to optimize present resources and to present submissions for enhancement. Mr. Lavictoire noted that, notwithstanding the delays attributable to the major restructuring of land ambulance services and the fact that communication centre staff and paramedics in the field are demoralized at this time, employees remain competent and efficient in managing and coordinating the delivery of pre-hospital care in the community.

Mr. Lavictoire presented the following statistics as a comparison with other jurisdictions:

No. of vehicles available per citizen;

- \Rightarrow in the RMOC, one vehicle serves 44,180
- ⇒ in Metro Toronto, 28,090
- \Rightarrow in Calgary, 35,500

Territory covered;

- ⇒ in the RMOC each vehicle covers 163 sq. kms
- ⇒ in Metro Toronto, 7 sq. kms
- ⇒ in Calgary, 42 sq. kms

Number of calls per vehicle;

- ⇒ in the RMOC one vehicle handles approximately 1800 calls per year
- ⇒ in Metro Toronto, 630 calls per year
- \Rightarrow in Calgary, 433 calls per year.

Mr. Lavictoire added that, as recently as July 1998, and as indicated in the OPALS study of base hospital statistics, patients suffering from cardiac arrest receive definitive care in under 8 minutes at 95.5% of the time. He concluded his presentation by saying that CACC staff will continue to work with other stakeholders to provide pre-hospital care for the citizens of Ottawa-Carleton and the surrounding municipalities. He invited those present to visit the call centre to see the overall system and to see that people work to the best of their ability. The Committee Chair, A. Munter, asked Mr. Lavictoire to convey the Committee's appreciation to CACC employees for the excellent work they perform under difficult circumstances. Chair Munter added that some of the information provided by Mr. Lavictoire underscores the fact the Region has excellent ambulance staff but there are just not enough of them.

Councillor Beamish asked for a staff comment on Mr. Lavictoire's statement regarding the findings of the OPALS study. Mr. Craig indicated base hospital numbers speak to the arrival of the first person capable or rendering any form of patient care, and does not speak to ambulance arrivals. In most cases, the number reflects the arrival of a fire department first response vehicle or of a basic life support ambulance, not to the arrival of a paramedic ambulance.

Councillor Beamish wondered why there was such a difference between what happens in Toronto and what happens in Ottawa-Carleton. Dr. Cushman asked whether Mr. Craig would comment on the disparities in the resources allocated for ambulance services across the Province. A. Craig pointed out that the Toronto ambulance program has been a municipal program since 1976 and, until January 1, 1998, there was a co-funding arrangement with the Province.

The Ministry set the number of ambulances it called "approved expenses" and this number was considerably lower than what staff knew was the number required to reach response time standards medically needed in the community. The Ministry paid approximately 50% of the bill and the municipality funded the rest from the municipal tax base. The cost of ambulance service in Toronto is \$67 million, with \$8.3 million from the Ministry for dispatch service.

Brian Moloughney, Chief Steward, Ontario Public Service Employees Union, Local 413

Mr. Moloughney began by saying strong action must be taken to restore public confidence in ambulance service delivery in the RMOC. While public confidence has been damaged, OPSEU supports the release of the report and its findings. The Union has worked many years to try to affect change and to address the system's shortcomings.

Mr. Moloughney continued by saying Local 413's membership has been embarrassed and demoralized to some degree, but it has been offered a ray of hope. The shortcomings have been exposed and the RMOC is now in a position to address this matter. In addition, regional staff are being given an unique opportunity to redesign an essential, public emergency service.

Mr. Moloughney spoke about representations having been made to both Premier Harris and to the Minister of Health, requesting immediate corrective actions, and calling on the Province to relinquish control of dispatch to the RMOC. He highlighted the fact the Province does not insist on running dispatch for police or fire departments, but it does maintain regulatory authority in each of these areas. Mr. Moloughney posited there is no reason why the Province should run ambulance dispatch to maintain its regulatory authority over the service.¹

_

¹ The complete text of Mr. Moloughney's presentation is on file with the Committee Co-ordinator.

Ms. Brigitte Lalonde, President, Ottawa-Carleton Paramedic Association

Ms. Lalonde began by saying the Association was founded in 1995 as the result of paramedics' frustration that there was not a better way to answer the public need in accordance to the training they were getting. Some of the rules and policies that now paralyze the system have been changed. She spoke about the lack of consultation between the dispatching system and the ambulance system and she expressed the hope the worker on the street would be consulted to see if there was a better way of doing things. Ms. Lalonde said she agreed the rules should be changed before injecting the amount of money required into the new system, to ensure more efficiency. She added that currently, there is no logic in who answers a call, it is usually the vehicle closest to the situation, since dispatch doesn't have the right to differentiate between situations and relocate another vehicle that could be better used. Ms. Lalonde said part of the response time difficulties lies with poor technology, a radio system that does not work well all the time, and difficulties contacting an ambulance because the driver is inside a hospital delivering a patient. Another problem is that, at times, not that many ambulances are available. The satellite positioning system is part of the problem; if a has to ask five or six vehicles about their location before deciding which one to send, important time is consumed. Hospital restructuring has also contributed to these difficulties. Ms. Lalonde expressed the hope many of these problems will be rectified through the establishment of a new system.

Councillor Kreling asked whether, in the protocols used in Toronto or elsewhere, dispatchers are given the authority to use their judgment in assigning calls. Mr. Craig replied in the affirmative, adding that the new computer-aided dispatch software being launched proposes the closest three ambulances available and highlights them on a digital map thus empowering the dispatchers to make the determination.

Councillor McGoldrick-Larsen want to clarify she has every respect for the professionals working in the field who are really doing their best within the existing system. She pointed out that most of the paramedics moving to the advanced level are doing so on their own initiative, because they really love their jobs and want to improve the service to their patients. She asked whether Ms. Lalonde would comment on the frustration experienced by paramedics trying to find a hospital where they can take patients.

Ms. Lalonde indicated that hospitals now and then update the dispatch centre about the status of their emergency rooms, about how many people they have and whether or not they are able to deal with life-threatening emergencies. This is a source of frustration and stress because it may be several kilometers farther to access emergency services and it makes vehicles and paramedics less available for the next patient.

Mr. Wayne Villeneuve and Mr. Jean Martel, Central Ambulance Dispatch

Mssrs. Villeneuve and Martel are the Union representatives for workers in the dispatch centre. Mr. Villeneuve pointed out that the system has been under a lot of criticism lately, leading the public to believe the quality of ambulance service is far below the acceptable norm. He said he did not feel this was an accurate picture and it was not something that happened all of a sudden. While the references to delays in responding and the difficulties in assigning priorities are fairly accurate, the responsibility does not lie solely with the dispatch centre. There are problems with the number of providers, that is paramedics and dispatchers, and the fact that governing policies did not evolve with the increase in the number of calls. The introduction of paramedics has contributed to multiple levels of patient care being performed on the road. Dispatchers have not been assisted in dealing with new demands and standards. There are also problems with maintaining staffing levels in the communication centre, which is understaffed most of the time.

Mr. Villeneuve concluded by saying dispatchers are as valuable in the current system as any part of it; their expertise has not suddenly declined and they are efficient given the tools they have. Dispatchers are proud of the work they do, and would like to see the system enhanced to provide better service.

Mr. René Berthiaume, Rural Metro Ontario Ambulance Service

Mr. Berthiaume congratulated regional staff for retaining Mr. Alan Craig, whose quality of work and expertise are renowned. He is one of the few Canadian experts in ambulance service and the Region can be fully confident in the information he brings to this matter. Mr. Berthiaume noted that operators in Ontario have been aware of this information, and have brought matters to the attention of the Ministry. However, there was no willingness to look at the issues, the Ministry said the system was working and didn't need to be fixed.

The ambulance services association was aware there were opportunities to better serve the public, and is pleased to see the matter come to the table. The speaker said he felt the public should not be alarmed at this point, as the system is still functioning, but it can function better...

<u>Dr. Justin Maloney, Director, Base Hospital</u>, called the report credible and important; the depth of analysis is worthy of admiration. Many of the details highlighted, while alarming, are not necessarily new. Dr. Maloney said he was glad to see the level of frustration around the table, and he reminded Committee members the Region will soon own the system. He suggested Councillors familiarize themselves with the business, visit the dispatch centre, and approach the matter as the average citizen would. He reinforced earlier statements about this not being a people problem but a systemic problem, as there are really good people working in the field in Ottawa-Carleton. Dr. Maloney said he has been involved in training many of the paramedics, and they know the system's failings. He emphasized that dispatch is the heart of the system, it controls resources and success rates at many levels. The Region is right it pursuing it but it will cost money to fix, i.e., new software and training for personnel.

Committee Discussion

Councillor D. Holmes wanted to ensure Council reiterate to the Ministry that, in spite of the difficulties foreseen, the Region is still interested in assuming land ambulance services. However, the Ministry must be asked to divulge the real cost of the service, and, to this end, Councillor Holmes put forward the following Motion:

THAT COUNCIL advise the Minister of Health that the Regional Municipality of Ottawa-Carleton is prepared to take on the responsibility for ambulance service in Ottawa-Carleton and wishes to work cooperatively with the Ministry of Health to resolve the outstanding issues, specifically, the need for local control of dispatch and the need for adequate financial resources to deliver this service; and,

THAT COUNCIL request that the Province appoint a mediator, who would work with the Region and the Ministry to satisfactorily resolve these matters; and,

FURTHER THAT this resolution be circulated to Ottawa-Carleton M.P.P.s the Association of Municipalities of Ontario and to the neighbouring county councils.

Councillor Kreling expressed reservation about asking the Province to appoint a mediator, inquiring whether all hope was lost of arriving at a negotiated solution with the Ministry. Ms. Yelle-Weatherall reiterated staff have a commitment from the Minister's office for further discussion and will continue to work towards a win/win solution. Dr. Cushman added there is quality dialogue with the Minister's Office, but this still has to happen with the Ministry's ambulance branch. A mediator may not have to work too hard and this would underscore the importance of moving on dialogue. Chair Munter noted part of the problem is that there have been back and forth discussions with Ministry, and efforts are now being made to get the Minister involved to move beyond the Ministry/Regional staff box.

Councillor Kreling said he could support the Motion, given that it puts forward a process by which the Region can attain its goal. He spoke about comments made at an earlier meeting by some of the individuals present today, on how open and refreshing it was to deal with the Region in comparison to the Province. The Councillor said he hoped those present realized that same openness can have a double-edged effect when referencing problem areas; it makes all parties accountable and responsible for changing the situation, and for issues coming to a positive conclusion.

Councillor McGoldrick-Larsen said she wholeheartedly agrees the Region must control dispatch to make the system work; there is no question centralized dispatch would provide a seamless service. She asked whether staff could provide a notional figure for what the service might cost in Ottawa-Carleton. Mr. Craig pointed out that the first two to four minutes' improvement in response times will come procedurally, not with money. In addition, the Region will describe the level of service it wants to provide and ask others how they will do it and at what cost. Another factor is the uncertainty about what the Ministry will hand over, and there are many unknown factors about capital expenditures.

He said his best guess would be somewhere between \$20 and \$24 million, and there may be efficiencies through exceptionally good responses at the Expressions of Interest and Request for Proposal stages. Councillor McGoldrick-Larsen opined it is crucial the costs become part of the dialogue with the Ministry and as the Region begins its budgetary process. It is also crucial that residents understand the importance of the information contained in the report as it provides a picture of where Ottawa-Carleton is compared to other cities and what the ultimate cost is going to be.

Councillor L. Davis related that, in her experience, most of the primary response has come from firefighters, and this is a source of concern to her. She said she did not believe that highly trained people should arrive at the scene after fire trucks arrive; they need to be deployed in other ways and this will be done by taking over dispatch. The ambulance service should be given the tools it needs to do its job, and this will only happen by providing it with funds. Councillor Davis said she would like to see the Region tally up what the costs will be and approach the Province before taking over, to hold the Province accountable and to secure the right amount of funding. She emphasized the need to be proactive in negotiating for the entire package.

The Committee Chair, A. Munter, began by saying it isn't often in the municipal sector that politicians deal with life and death issues. He made reference to Dr. Maloney pointing out this will become the Region's problem and, while Councillors can and should be indignant about what the Ministry of Health has done with the service in the past, in 13 short months it will be their job to fix it. Chair Munter thanked Dr. Cushman, Ms. Yelle-Weatherall and Mr. Craig for the hard work they have done, and the participants in today's meeting for their candor in speaking out about the system. He said he was hopeful that reiterating the Region's original position about adequate financial resources being required and needing local control of dispatch, and asking the Province to mediate on these issues, would bring about a resolution. Chair Munter noted that, while the Committee often complains about services being downloaded, he did not feel this was applicable to land ambulance service being at the local level, along with police, fire and 9-1-1 services. He said he supported the provincial decision, but it has to come with the appropriate funds and the tools necessary to protect the health and safety of residents of Ottawa-Carleton.

The Committee then considered the following Motion:

Moved by D. Holmes

THAT COUNCIL advise the Minister of Health that the Regional Municipality of Ottawa-Carleton is prepared to take on the responsibility for ambulance service in Ottawa-Carleton and wishes to work cooperatively with the Ministry of Health to resolve the outstanding issues, specifically, the need for local control of dispatch and the need for adequate financial resources to deliver this service; and,

THAT COUNCIL request that the Province appoint a mediator, who would work with the Region and the Ministry to satisfactorily resolve these matters; and,

<u>FURTHER THAT this resolution be circulated to Ottawa-Carleton M.P.P.s the</u> Association of Municipalities of Ontario and to the neighbouring county councils.

CARRIED, as amended