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Devolution or Downloading...

The Financial and Service Effects of Local Services Realignment

on

Ontario Ambulance Services

MPA Research Report

Submitted to

The Local Government Program
Department of Political Science
The University of Western Ontario

August, 2002

John Prno

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INTRODUCTION

As part of Ontario's "Who Does What" (WDW) and Local Services Realignment (LSR) initiatives, key elements for funding and control of the province's ambulance services were devolved to Upper Tier Municipalities (UTMs) and Designated Delivery Agents (DDAs) beginning in 1998. Devolution is defined as the transfer or delegation of power to a lower level, especially by cental governments to local or regional administration[1]. This differs somewhat from the definition of downloading, i.e., to shift or relegate responsibilities or costs for a program from one level of government to a lower one[2]. Regardless, the provincial government insisted that the LSR process was not about squeezing budgets, but rather about more efficient government using best practices to save money for the taxpayer, while sorting out which level of government could best deliver a particular service[3]. Their stated goal was more accountable, less costly and simplified government[4].

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[1] The New Oxford Dictionary of English, Pg. 506

[2] The Canadian Oxford Dictionary. Interestingly, a reference to downloading other than in the computer sense, cannot even be found in the New Oxford Dictionary of English. The only definition is found in the Canadian Oxford Dictionary where it is noted to be of Canadian origin, with the Harris "download" of social services used as an example.

[3] Speaking Notes for Minister Al Leach - Association of Counties and Regions Conference, Sudbury, October 6, 1997, Pg. 5

[4] "Who Does What" in Ontario: The process of provincial-municipal disentanglement, Pg. 176

This paper has four main objectives:

- First, to document the process of transition from a provincially micro-managed ambulance system to fifty separate and distinct units operating under a common set of guiding principles.
- Second, to compare the levels of service provided and costs incurred at both the provincial and municipal levels, pre and post transition.
- Third, to use data from sample municipalities in an attempt to determine differences in costs and service levels between municipalities who chose to contract for ambulance service rather than deliver it themselves.
- The paper concludes with a summary of the perceived successes and failures of the transition of Ontario's ambulance services, and discusses whether the action met the government of the day's objectives for their WDW initiative.

To best understand the issues involved, it is necessary to begin by reviewing the history of this unique public service.

A BRIEF HISTORY OF THE AMBULANCE SERVICE IN ONTARIO

Not unlike other jurisdictions, Ontario's ambulance services have emerged from roots embedded in both health care and the private sector, evolving along a somewhat convoluted path into the current municipally controlled service delivery models. While the first municipally funded hospital ambulance services appeared in Toronto as early as

1880, and were similarly well established in Berlin-Waterloo by 1903[5], Emergency Medical Services (EMS) were not municipal priorities in other parts of the province.

During the first half of the 20th century, it was not uncommon to see private ambulance services operating as sidelines for funeral homes, or even furniture stores, taxi and towing companies. While some would see providing ambulance service as a serious conflict of interest for the funeral director, their involvement was generally borne out of a commitment to provide a much needed community service... not to mention that theirs was often the only equipment in town capable of comfortably transporting patients lying down! The funeral home was already staffed, the telephone answered 24 hours a day, and the staff's education in the natural sciences, second only to that of the local physician.[6]

In larger communities, a number of commercial ambulance services were often available, although no means existed to co-ordinate their efforts. There was no provincial funding for ambulance services, payment was on a full fee-for-service basis, and there were no uniform standards for patient care, training or equipment.[7] No 9-1-1 telephone or centralized dispatch systems were yet in place, and a competitive element often affected quality of care provided. Unlike today, it was sometimes better to be the last ambulance arriving at the scene of a motor vehicle collision, rather than the first and fastest.

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[5] A Century of Red Blankets, Pg. 15

[6] The 1,100-Year History of the Ambulance , Pg. 49

[7] The Final Report of the Emergency Medical Services Review, Pg. 2

Arriving ambulances commonly blocked the ambulance ahead to prevent them from being able to transport patients. Thus, the last arriving ambulance was the only one assured of a paying customer. Despite the competition, there was no guarantee that the personnel aboard any of these ambulances were even marginally trained. No standard of training was prescribed, and one 1963 study revealed that only 141 of 181 operators contacted, even had staff with basic first aid training[8].

During the late 1960s, Dr. Norman McNally, then Director of the Emergency Health Services Division (EHS) of the Ontario Hospital Services Commission (forerunner of today's Ministry of Health and Long Term Care), was charged with developing "a balanced and integrated system of ambulance services..." [9] out of a "hodge podge" of 425 services of widely varying quality that existed around the province. Under his direction, EHS set out to first standardize training levels among ambulance attendants, then improve vehicles and equipment. McNally's stated goal was eliminating the private services, then consolidating them to gain benefits of scale, and placing them under the control of hospitals where stable funding, training and quality assurance could be maintained.[10] Unfortunately, the cost of this worthwhile venture was grossly underestimated, and financial limitations negated the government's wholesale purchase of all private ambulance services.

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[8] A Century of Red Blankets, Pg. 63

[9] Ibid, Pg. 67

[10] The Business of Ambulance Service In Ontario, Pg. 1

From 1968-1973, licensed ambulance services could not be sold between operators... only back to the Ontario Hospital Services Commission (the Ministry of Health after 1971). The mid-1970s however, saw a reversal of this trend towards public consolidation, with a new emphasis on private sector involvement in the management and delivery of ambulance services. From 1973 on, service licenses and assets were bought and sold as business undertakings.[11]

What remained in place from the 1970s was an ever-evolving mix of approximately 175 publicly contracted (hospital and municipal), private, and directly operated (OPS) ambulance services, that were all fully funded and directed by the Ministry of Health. Some 40% of these services were operated by private individuals/corporations in a unique relationship described by the Executive Director of the now defunct Ontario Ambulance Operators' Association:

> *Beginning with the first Ambulance Act in 1966, private operators and the Ontario government entered into a form of public/private partnership. The government provided the vehicles and the cash while the operators provided business expertise and operational acumen.*[12]

While the private operators obviously felt they had control over their own businesses and the Ministry considered them independent operators, a review of the actual business practices indicates otherwise. Ambulance Operators acted in a managerial role rather

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[11] The Final Report of the Emergency Medical Services Review, Pg. 3

[12] The Business of Ambulance Service in Ontario, Preface

than a traditional "at risk" entrepreneurial business relationship. Micro-management was a hallmark of the Ministry-Operator relationship, with every aspect of the operation significantly controlled by the Ministry. Operations of the services were managed centrally through six Regional offices of the Emergency Health Services Branch. Ambulances and major capital equipment were provided at no charge to the Operator, while other expenses were detailed in Ministry-approved line-by-line budgets, and then cash flowed automatically to the Operator. A system of "one-time" approvals and payments was provided for unexpected expenditures. As any expenditure required prior Ministry approval before proceeding, there was little if any capital risk to the Operator.[13]

During the decade preceding the WDW activities, labour unions strongly lobbied for change in the governance of ambulance services that they hoped would lead to service improvements, widespread implementation of advanced paramedic skills, and standardization of wages. The most significant outcome of their efforts was a 1989 Labour Relations Tribunal report commonly known as the "McKechnie Report"[14] (after the Collingwood ambulance operator of the day), in which the Ontario Public Services Employees Union (OPSEU) challenged the government's stance that ambulance operators were independent businesses.

[13] Emergency Medical Services in the Regional Municipality of Waterloo, Pgs. 3-4

[14] Ontario Public Service Labour Relations Tribunal between OPSEU and the Crown, in the Right of Ontario (MOH) and McKechnie Ambulance Service Inc.

The Tribunal concluded:

> *that the ambulance service provided by McKechnie Ambulance is the Ministry's business. Virtually every significant and tiny aspect of the business is tightly controlled by the Ministry. There is virtually nothing of substance left for McKechnie Ambulance to decide. There is virtually no room for independent discretion.*

They decided that on the basis of perspective of control, ownership of tools, and chance of profit and risk of loss, that the Province was actually the Employer. They further designated McKechnie Ambulance as an Agent of the Crown, and its employees as Crown employees for bargaining purposes. The McKechnie decision ultimately resulted in the similar designation of some 97 ambulance operators and their employees through 1995's *Public Service Act* Regulation 57/95. The initial result of this decision was first time central bargaining and wages matching their Ontario Public Service (OPS) counterparts, for many of the private ambulance operators and their employees.

Despite two major reviews of EMS governance and structure, this rather eclectic mix of "private", hospital, municipal and OPS ambulance services remained in place until the Local Services Realignment initiative of the Harris era. Interestingly, in The Final Report of the Emergency Medical Services Review commissioned by the Ministry of Health in 1991, the Review's Chair, Professor Gene Swimmer, unknowingly predicted the decision

that would have to be made seven years in the future as part of WDW:

> *I think that the public* (all provincial employees and state assets - author's clarification) *and municipal models, identified as having the most positive aspects, are of equal merit. It is probably true that a public model will provide a higher minimum standard of service across the province, at a potentially higher cost. Other than that the major point of comparison seems to be the organizational model itself, involving a decision on whether emergency health services should be provided by the provincial government or devolved to the municipal level.*[15]

THE HARRIS "WHO DOES WHAT" INITIATIVE

This section is not intended as a comprehensive review of the Harris government's efforts at provincial-municipal disentanglement, but rather will summarize the WDW elements that directly affected realignment of ambulance services in the province.[16]

Under Harris, Ontario's Progressive Conservatives with their "Common Sense Revolution" manifesto, won a resounding victory in the 1995 provincial election. Four key themes made up this Common Sense Revolution platform: Less and Simpler Government reducing waste and overlap between levels of government (as well as reducing involvement of the provincial government in direct service delivery); a Fiscal Focus on attacking the provincial deficit and cutting provincial income taxes; and a

[15] Final Report of the Emergency Medical Services Review, Pg. 19

[16] For a comprehensive review of the entire process including prescription of the Toronto megacity, refer to the Graham and Phillips' article: *"Who Does What" in Ontario: The process of provincial-municipal disentanglement*

Competitiveness Agenda promoting a leaner, simpler and fiscally tight-fisted government that would once again have Ontario "open for business".[17]

Having sensed that their "Common Sense Revolution" had struck a sympathetic chord with the electorate, the Harris Government moved decisively and immediately upon taking office. Massive budget cuts and the initiation of major restructuring across the education, health and municipal fields were packaged together so as not to attract undue attention to any one specific effort. In their paper, Graham and Phillips describe the Harris government as wanting to "reshape their core business and simplify and reduce the entire public sector".[18]

The resulting Omnibus Bill 26 (the *Ontario Savings and Restructuring Act*) led to the May 1996 appointment of the "Who Does What" Panel, chaired by well respected former Toronto Mayor and MP David Crombie. The Panel was empowered to make recommendations on how best to overhaul funding and delivery of a wide range of government services at both the provincial and municipal levels, with the overall goal being the reduction of waste, duplication, and the overall cost of government. Subpanels were planned to specifically address 1) tax reform and the assessment system; 2) emergency services; 3) social services; 4) transportation and utilities; 5) municipal

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[17] "Who Does What" in Ontario: The process of provincial-municipal disentanglement, Pg. 178

[18] Ibid, Pg. 182

administration; 6) education; and 7) public health.[19] Given the government's intention to move quickly, time lines were extremely tight with the Panel directed to provide short sequential reports from the subpanels, and have all of the Panel's work completed within seven months.

The WDW Panel adopted four guiding principles[20] for its wide ranging scope of work:

- Municipalities were to be seen as having strong roles in "hard" services to property and infrastructure, while "soft" human services such as education, child care, health and welfare would be seen more appropriately as a provincial responsibility.
- Income redistribution, as a "soft" service, should be funded provincially.
- Where possible, only one level of government should be responsible for spending decisions, and that government should have funding responsibility.
- There should be an appropriate balance between the allocation of responsibilities and availability of resources, i.e., service exchanges between levels of government should be revenue neutral.

In all, the WDW Panel made over 200 recommendations within these principles. As the Ministry of Health was in the midst of its own health-care restructuring process, it was

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[19] "Who Does What" in Ontario: The process of provincial-municipal disentanglement, Pg. 183

[20] Ibid, Pg. 185

hesitant to participate in WDW and the seventh subpanel on Public Health never came to fruition. Health issues were addressed instead by the Social Services subpanel, or in the case of ambulance services, through the emergency services discussions. The Emergency Services subpanel report of November 12, 1996, viewed ambulance services as part of the health care system and recommended that they continue to be provincially funded. This recommendation included fully funding Toronto EMS ($35 million) which had a lengthy history of cost-sharing ambulance service costs to allow for levels of service above the provincial "standard".[21]

Within three weeks of Crombie's final report letter on December 23, 1996, the government acted on its disentanglement plans. Rather than producing discussion papers that were open to negotiation with stakeholders, the government's "Megaweek" announcements unveiled final plans obviously intended for quick passage by its majority in the legislature. While the government accepted most of Crombie's recommendations, its own agenda forced a departure on several key elements.

Harris' stated intention to gain full control of education, directly contradicted both a WDW Panel guiding principle and the recommendation in Crombie's final letter. If such a huge expenditure moved from the residential property tax base, there was simply no way that other high cost human services such as social services, could also be fully

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[21] WDW Panel, Emergency Services Letter - November 12, 1996

transferred. It became a fairly simple exercise then, of filling the tax gap left by education, with other services that could be transferred to the municipalities. Graham and Phillips describe this mathematical exercise as the reason "why social housing - which was not part of the Crombie panel's discussions - became part of the Megaweek equation.".[22] While not officially confirmed, anecdotal information would indicate that the downloading of ambulance services was a similar monetary chip put forward in direct opposition to Crombie's recommendations.

The announcements over four days during the week of January 13, 1997, consolidated the government's disentanglement initiatives. Monday saw education costs removed from the residential tax base with the number of school boards and trustees cut as well, while Tuesday was the day for ambulance and other soft services. As of 1998, municipalities would assume full responsibility for the cost of ambulance services, as well as social housing, public health, special care homes and rural policing. In addition, the cost of child care, long term care and welfare programs, shifted significantly to the municipalities. Wednesday saw hard services such as local airports and ferries, public transit, water and sewage treatment transferred to municipalities, while Thursday revealed the planned introduction of property-tax reform based on actual-value assessment.

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[22] Who Does What" in Ontario: The process of provincial-municipal disentanglement, Pg. 187

Despite evidence to the contrary, the Harris government continued to deny the initiative was merely a downloading of costs to the municipalities. Graham and Phillips noted the major municipal concerns that:

> *expenditures on services with consistently countercyclical demands (such as welfare) or with consistently rising costs (such as long term care)* (and ambulance services - author's comment) *would undermine the stability of municipal revenue sources. To the municipal sector, the province appeared to have been strategic in downloading services with costs that were rising or difficult to control while assuming education, the costs of which are more constant and controllable. If stable or declining birthrates are any predictor of education costs, education expenditures may eventually shrink.*[23]

Months later with the deadline for devolution approaching, then Municipal Affairs and Housing Minister Al Leach, continued to reinforce the government's view that WDW was not about downloading:

> *this is not about counting the number of services and dividing them up between the province and municipalities. This is about improving the way we all deliver services... clarifying lines of responsibility... increasing accountability... lowering costs... providing better services to the people of this province.*[24]

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[23] "Who Does What" in Ontario: The process of provincial-municipal disentanglement, Pg. 191

[24] Speaking Notes for Minister Al Leach - Association of Counties and Regions Conference, Sudbury, October 6, 1997, Pg. 6

THE TRANSITION TO MUNICIPAL CONTROL OF AMBULANCE SERVICES

As of January 1, 1998, Upper Tier Municipalities became responsible for 100% of land ambulance costs. The initial municipal response was overwhelming opposition. While many municipalities felt that ambulance services were a clear and appropriate provincial Health responsibility, more were simply concerned with the fiscal impact of any downloading to the local tax base. However, the intensity of opposition lessened significantly once negotiations between the government and AMO resulted in a March 1999 cost-sharing announcement. Among other funding changes, the province agreed to pay 50% of approved ambulance costs, retroactive to January 1, 1999.[25] [26]

In conjunction with the initial funding responsibility transfer, all Upper Tier Municipalities and Designated Delivery Agents had been given overall operational responsibility for land ambulance services, effective January 1, 2000. This responsibility allowed municipalities to either contract or directly deliver land ambulance services. With the March 1999 announcement regarding 50/50 cost sharing, the deadline to assume operational responsibility was postponed until January 1, 2001 at the request of municipalities.[27]

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[25] Land Ambulance Transition Practical Guide, Pg. 2

[26] Local Services Realignment Guide, Pages 4.38-4.39

[27] Land Ambulance Transition Practical Guide, Pg. 2

During the subsequent transition period, the Minister adopted recommendations made by system stakeholders through the Land Ambulance Transition Taskforce (LATT), in setting guiding principles for municipalities to adhere to upon selecting a service delivery option.[28] [29] Each municipality was required to ensure an uninterrupted transfer of ambulance service from the Province, with the service provided conforming to the *Ambulance Act*, applicable regulations and other relevant legislation. The guiding principles adopted,[30] required ambulance service to continue to be:

- ***Accessible:*** All residents of Ontario are to have equal access to ambulance service regardless of socio-economic or demographic status. Upper Tier Municipalities, in co-operation with their delivery agents, will be responsible for ensuring that sufficient resources are available to guarantee reasonable access to ambulance service.
- ***Integrated:*** Each ambulance service and ambulance is an integrated part of the Emergency Health Care Services System of the Province. Patient transport between health care facilities for medically essential services must remain an essential part of this system. Central Ambulance Communications Centres (CACCs) will ensure that the closest available, appropriate ambulance vehicle responds to a call to meet the needs of a patient. Upper Tier Municipalities, in co-operation with their delivery agents, will be responsible for ensuring that land

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[28] Review of the Ambulance Regulation/Report of the Land Ambulance Transition Task Force, Pg. 3

[29] Land Ambulance Transition Practical Guide, Pg. 4

[30] Emergency Medical Services in the Regional Municipality of Waterloo, Pg. 7

ambulance service continues to be an integrated part of the provincial Emergency Health Care Services System.

- ***Seamless:*** The closest available and appropriate ambulance will respond to a patient at any time and in any jurisdiction regardless of political, administrative or other artificially imposed boundaries. Upper Tier Municipalities and their service delivery agents are obliged to ensure that ambulance services are readily available regardless of location or timing.
- ***Accountable:*** Ambulance service operators are medically, operationally and financially accountable to provide ambulance service and patient care that is of the highest possible caliber. Service delivery will be monitored by municipalities, as well as through Base Hospitals, CACCs and the Ministry of Health and Long Term Care. Upper Tier Municipalities will bear overall accountability for service delivery through their agreements with operators.
- ***Responsive:*** Municipalities and ambulance service operators must remain responsive to the changing health care, demographic, socio-economic and medical needs in their area.

As part of the transition process and upon assuming control, vehicle and equipment assets owned by the Ministry of Health and Long Term Care, were transferred to municipalities at no cost.

OPTIONS FOR SERVICE DELIVERY

There has been considerable debate over who should provide paramedic services to the public. However, even California's libertarian "free minds and free markets" think tank: The Reason Foundation, agrees that:

> *the key to superior EMS performance is not, per se, whether government or the private sector is the paramedic provider, but whether the system is designed and structured for efficient and effective performance.*[31]

Both high and low quality services are routinely produced by organizations representing the entire socialized (public) and privatized spectrum of ambulance service providers. Ernst and Young's 1996 review of the then Metropolitan Toronto Ambulance Service, further noted that:

> *there is no scientific evidence that a particular EMS system run by a private provider, fire department, etc., is more effective than another. In addition, the studies that review one system/ownership model over another typically have specific agendas which add to the complexity of the analysis.*[32]

The Ontario Hospital Association position paper on ambulance issues suggests an overarching principle where regardless of service model:

> *It is integral to the efficiency and effectiveness of the broader health system in Ontario, that the land ambulance system be based on sound financial, organizational and administrative principles so those who use ambulance services receive the best possible care.*[33]

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[31] Privatizing Emergency Medical Services: How Cities Can Cut Costs and Save Lives , Pg. 5

[32] Review of the Metropolitan Toronto Ambulance Service, Pg. viii

[33] Land Ambulance Issues for Ontario's Hospitals, Pg. 5

Hospitals certainly have an important stake in ensuring the continued quality and timeliness of local ambulance services, as these factors affect the condition of the patient upon arrival in their emergency departments. Receiving high quality pre-hospital care improves patient outcomes, decreases the length of a patient's hospital stay, and positively impacts on the overall use of hospital resources. Delays in the arrival of ambulances for transportation to other diagnostic and treatment facilities can create significant inefficiencies in hospital operations and cause discomfort and anxiety for patients. As hospitals pay for nursing escorts to accompany many of these patients, inefficiencies within the ambulance system can significantly increase hospital operational costs.

With emergency call volumes continuing to grow, the availability of ambulances to perform inter-hospital transfers has lessened. Understandably, municipalities and hospitals alike, feel these essential transfers are a responsibility of the Ministry of Health and have requested additional funding and the development of a parallel patient transfer system to resolve these concerns. The Ministry has since engaged the IBI Group to make recommendations on this issue, but at the time of transition, the responsibility for these transfers remained with the municipalities.

As noted earlier, municipalities were given the option of either becoming the service provider themselves or contracting for ambulance services. Permitted contracting options were either continuing with <u>all</u> of the existing providers in their municipality, or awarding

delivery to the successful applicant in a call for "highest quality, best price" proposals. With a key theme of the Common Sense Revolution being the "open for business" competitiveness agenda, many felt that the government was promoting fully privatized ambulance service in the Province. A number of groups and supporting documents appeared overnight, espousing the virtues of privatized ambulance service under the guise of Public-Private partnerships.[34] While the documents tended to disguise their blatant preference for privatization with well written overviews that educated the inexperienced on Emergency Medical Services basics, they were conspicuous in their sponsorship by major American ambulance consolidators and private ambulance associations.

Surprising I'm sure, to those promoting WDW as a means of cutting the size of government through "contracting out", many municipalities reviewed the options available and ultimately chose to deliver ambulance services. Other municipalities chose to temporarily contract with an established provider while "learning the ambulance business". Several of these municipalities are now converting to the direct delivery model as well.

What is perhaps more surprising, is the reduction in significance of "not-for-profit" hospital-based ambulance services. Hospital-based services made up nearly 40% of all ambulance services in the province at the time of devolution, and were the principal

[34] E.g., Contracting for Emergency Ambulance Services - Revised for Use in Ontario; Options for Municipal Emergency Medical Services - A User's Guide (Ontario); Towards Best Practices in Ambulance Services - A Submission to the Ontario Land Ambulance Task Force

providers in northern Ontario (62% in Northeastern and 55% in Northwestern Ontario).[35] Today, only 28% of the Designated Delivery Agents contract with one or more hospitals to provide service[36], and the number continues to drop.

Many hospitals did not show any interest in bidding for contracted services, choosing to concentrate on their "core" hospital services rather than subsidizing an underfunded ambulance system. There were however, key exceptions in major players such as Kingston and Niagara's Hotel Dieu Hospitals, that both felt regionalized ambulance service operations were key health services they should provide for their communities.

In considering service delivery options, municipalities conducted a number of in-depth costing reviews and failed attempts at negotiating reasonable contracts with existing service providers.[37] A number of significant experiences are summarized as examples:

- The IBI Group, acting as consultants for ten Southwestern Ontario Upper Tier Municipalities (Bruce, Elgin, Grey, Huron, Lambton, Middlesex, Oxford, Perth, Chatham-Kent, and then Haldimand-Norfolk), reported "Municipal Delivery" (direct delivery) as the least expensive model for providing ambulance service in all ten of the study municipalities. "Municipal Delivery" was between 2.3% and

[35] Land Ambulance Issues for Ontario's Hospitals, Pg. 10

[36] Compiled from EMS Municipal Organizational Chart - Association of Municipal Emergency Medical Services of Ontario, and Emergency Health Services Branch Directory of Ambulance System Services

[37] Emergency Medical Services in the Regional Municipality of Waterloo, Pgs. 10-11

3.2% less costly (mean 2.7%) than "Service Management" (contracted out).[38] Despite this determination, six of these municipalities initially chose contracting out, although two have since converted to direct delivery.

- In a similar review conducted for Durham, York and Halton Regions, IBI projected the cost differences between a "Public Service" (direct delivery) model and "Private-for-Profit" (contracted out) model. By 2004, the "Public Service" model was estimated to save $2.86, $3.06 and $1.46 million annually in Durham, York and Halton Regions respectively.[39]
- Niagara Region chose to undertake an RFP process for contracts reflecting the existing level of service, then compared the preferred bidder to an independently created Direct Delivery Business Plan. Three bids were received: Hotel Dieu Hospital (the existing provider in St. Catharines), Canadian Medical Response (CMR) - A division of Laidlaw, and Rural/Metro Ontario. Over the five year term of the contract, the two private contractors bid $6.87 - $11.7 million more than Hotel Dieu ($1.37 - $2.34 million per year). Despite this, the year 2000 costs by Hotel Dieu were $.6 million more than the same level of service under the "Direct Delivery" option. As the independently created proposal lacked certain critical elements, the Region chose to award the initial contract to Hotel Dieu, while further considering and developing the "Direct Delivery" option.

[38] Southwestern Ontario Municipalities Land Ambulance Service Review

[39] Land Ambulance Services Review - The Regional Municipalities of Durham, York and Halton

- Hamilton-Wentworth Region (Now the New City of Hamilton) chose "Direct Delivery" after an unsuccessful negotiation attempt with existing provider, CMR. The "Direct Delivery" budget for 2000 was $11.9 million as compared to the CMR bid of $13.7 million, for an annual saving of approximately $1.805 million.
- In work completed for the Region of Sudbury (Now the City of Greater Sudbury), IBI predicted 2002 service costs of $12.7 million for outsourcing vs. $10.6 million for "Direct Delivery". The outsourcing costing included 14% in estimated business allowances/contingencies.[40]
- In an internal review, Waterloo Region predicted that "Direct Delivery" would provide an immediate saving of over $666,300 per annum over the cost of "Contracting Out", and that the difference would grow with the anticipated enhancement of service levels.[41]

Four years after the original devolution announcement, the process of transferring responsibility for land ambulance service from the province to municipalities, was finally completed. As of January 1, 2001, all Upper Tier Municipalities and Designated Delivery Agents assumed full responsibility to contract for, or to directly deliver ambulance service within their designated areas.

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[40] Land Ambulance Services Study, Interim Report - Regional Municipality of Sudbury

[41] Emergency Medical Services in the Regional Municipality of Waterloo, Pg. 48

There are presently 50 land ambulance service areas covering the province, of which 24 are Upper Tier Municipalities and 26 are designated land ambulance delivery agents. Of the 50 service areas, 41 are also Consolidated Municipal Service Managers (CMSMs) for Public Housing and Social Services.[42] In addition, three First Nations communities act as ambulance Designated Delivery Agents for the James Bay Coast, Oshweken (Six Nations), and Wikwemikong areas.

Although the mixture continues to evolve, at the time of writing, Upper Tier Municipalities and Designated Delivery Agents are providing service as follows:

- 23 deliver ambulance services as a department of the organization (Direct Delivery);
- 24 contract out ambulance services to another agency or corporation; and
- 3 use a combination of direct delivery and contracting out.

Three designated delivery services have announced plans to convert contracted service to direct delivery, effective January 1, 2003. By that date, direct delivery of ambulance services will be provided to over two-thirds of Ontario's population.[43]

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[42] Roles and Responsibilities - 2001 - The Provincial-Municipal Relationship in Human Services

[43] Calculated from Population and Dwelling Counts, for Canada, Provinces and Territories, and Census Divisions, 2001 and 1996 Censuses

CHANGES IN ACCOUNTABILITY

Historically, the Ministry of Health funded, directed and managed all elements of the provincial ambulance system, including policy development, service design and delivery, the Base Hospital quality assurance programs, dispatch of EMS resources, as well as providing vehicles and other capital equipment. With the recent devolution of land ambulance services to Upper Tier Municipalities, a new inter-governmental management relationship has emerged. This partnership is described by the IBI group in their recently completed "External Review of Hamilton CACC":

> *The result is a newly evolving management paradigm in which all land ambulance stakeholders, including UTMs, MOHLTC and CACC must learn to function within a decentralized system of shared accountability, with shared authority for specific components of the system, while working collectively to ensure the efficient, effective and seamless delivery of quality emergency medical services (EMS).*[44]

While provincial and municipal responsibilities for ambulance service are set out in legislation, the system stakeholders have been working through the Land Ambulance Implementation Steering Committee (LAISC) to establish and modify the appropriate policies, protocols and working relationships necessary in the new paradigm.

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[44] External Review of Hamilton CACC, Pg. 4

The *Ambulance Act* sets out the Minister's duties and powers to[45]:

- administer and enforce the *Act*;
- establish a council for the purpose of advising the Minister on matters respecting the provision of ambulance services[46];
- ensure a balanced and integrated system of ambulance and communication services;
- establish, maintain and operate communication services, alone or in co-operation with others, and to fund such services;
- establish standards for Certification, Patient Care and Transportation, Ambulance Service Documentation, Response Times and Communicable Disease, ensure compliance with these standards, and appoint an authority to certify ambulance operators;
- monitor, inspect and evaluate ambulance services, investigate complaints; and
- fund and ensure the provision of air ambulance services.

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[45] Sec. 4.(3): Part II - Provincial Responsibilities - Ambulance Act

[46] At present, LAISC serves this role

Interestingly, while the Ministry's responsibility for funding air ambulance services is established under the *Act*, financial support of land ambulance services is provided through a much more permissive statement. Section 4.(3) in Part II of the *Act*, states:

> *The Minister may* (emphasis added by author)*make grants to upper-tier municipalities, local municipalities, delivery agents and operators for the purpose of ensuring the provision of services under this act.*[47]

Upper Tier Municipalities are responsible for all costs associated with land ambulance service, subject to any such grants made by the Minister (currently 50% of approved costs as determined by a Ministry funding template). They must also[48]:

- establish governance mechanisms and the organizational structure that will manage the local ambulance system;
- develop short and long-term plans for meeting the needs of persons in the municipality, and engage in planning with neighbouring municipalities to ensure seamless service across area boundaries;
- determine whether to deliver the services directly or in a contracted relationship with a third party, and if so, manage contracts with these parties;
- ensure the supply of vehicles, equipment, services and information necessary for the proper provision of ambulance service;
- ensure the training and supervision of staff, maintenance of vehicles and equipment, and the provision of a quality assurance program; and

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[47] Sec. 4.(3): Part II - Provincial Responsibilities - Ambulance Act

[48] Roles and Responsibilities - 2001 - The Provincial-Municipal Relationship in Human Services, Pgs. 3-5

- ensure that service levels and quality are maintained, as is compliance with the legislated land ambulance service standards.

A MEASURE OF PROVINCIAL EMS FUNDING BASED ON POPULATION AND SYSTEM CALL GROWTH

During the last decade of total Ministry of Health control of ambulance services, providers complained constantly of serious under-resourcing from their masters. Hospital restructuring and a growing, aging population, seriously affected local ambulance services' ability to maintain appropriate service levels, especially in the rapid growth regions in and around the GTA. Even EHS has hesitatingly admitted to the need for additional funding. In their 1993 presentation to the Ambulance Study Committee reviewing systemwide governance options, EHS noted that "the current system, although under-funded, gives good value for the money.".[49] The Ontario Hospital Association's position paper: "Land Ambulance Issues for Ontario's Hospitals" further suggested that many costs of providing ambulance service were not being funded (at least to Hospital-based services), and "that a more accurate cost of transport may be 22% greater than the transfer payments now made by the Ministry of Health and Long Term Care".[50]

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[49] Report of the Ambulance Study Committee, Pg. 9

[50] Land Ambulance Issues for Ontario's Hospitals, Pg. 42

Historical Emergency Health Services Branch expenditures are detailed in Appendix II, with comparators broken down at Appendix IV[51]. A comparison of annual expenditures (April to March) to provincial population (as of July 1st each year) reveals a yearly cost per Ontario resident ranging from a low of $26.25 (1998-1999) to a high of $34.73 in 2000-2001. When the entire time frame from fiscal year 1996-1997 to 2001-2002 is reviewed, per resident EHS expenditures rose 12.5% or $1.12 ($28.53 - $32.10 respectively). The provincial population during the same time frame rose a similar11.6% or 1.53 million residents. Unfortunately, an aging and ailing population resulted in provincial ambulance call growth during the same years, of nearly 234,000 patient carrying calls (Codes 1-4), and almost 342,000 calls overall (Codes 1-4+8). This growth in call volume represented 26.4% and 30.5% increases respectively.

Emergency calls (Codes 3-4) rose 34.8% in the same time period (Calculated from data at Appendix IV). Ontario remains well above the industry expectations of 1 emergency response per day for every 7,000 - 10,000 residents[52], with a calculated volume of 1.32 - 1.89 during 2001 (Calculated from data at Appendix IV).

Although the provincial contribution kept pace with population growth between 1996-2001, it seriously underfunded system call growth. In fact, the 2001-2002 EHS estimated

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[51] Call volumes as provided by EHS from ARIS data. Received July 11, 2002. Expenditure calculations using data from Appendix II.

[52] Predicting Demand for Ambulance Service

expenditure per patient carrying call ($340.29) and all calls ($260.86), is less than the same per call calculations in 1996-1997 ($342.72 and $271.36 respectively).

When a 10.7% cumulative Ontario inflation rate is factored in for the same five-year time period[53], current EHS expenditures reflected in 1996 dollars total $28.99 per resident, $307.28 per patient carrying call, and $235.56 per call (C1-4+8). True EHS expenditures per call are now 89.7% (C1-4) and 86.8% (C1-4+8) of those during 1996-1997, despite over a 26% increase in call volume. It is important to realize however, that while the true EHS contribution has fallen, it now represents (at best) only 50% of EMS system funding.

Another, albeit poorly documented concern, has been the disparity in provincial funding between geographic regions. While limited in scope, the data collected for our six sample municipalities (i.e., Durham, Essex, Halton, Middlesex, Niagara and Waterloo) as summarized at Appendix VI, reveals Ministry funding across Southern Ontario ranging from $11.70 - $22.80 per resident during 1998.

[53] Consumer Price Index Historical Summary

THE RESPONSE TIME "STANDARD"

As part of the regulations set in place to "safeguard" the public in the wake of devolution, the Ministry of Health and Long Term Care amended the Ambulance Act to require that:

> *The operator of an ambulance service in an upper tier municipality or designated area shall ensure that, in 90% of the priority 4 (life threatening) calls received in a twelve month period, the response time performance is equal to the response time performance set by the person who operated the service in 1996.*[54]

1996 was selected for the benchmark year as this was the last full year that the Ministry had total control of ambulance service operations. While this requirement became known as the 1996 Emergency Response Time "Standard", it was anything but a true level of quality. A standard is normally thought of as being authoritative or of permanent value, and so is widely performed.[55] In reality, this "Standard" simply required ambulance services to provide the same level of service as in 1996. A municipality with poor response times in 1996 was only guaranteed the same poor response times in 2001 and beyond.

In a survey of 1996 emergency response times in 18 Upper Tier Municipalities and their 192 local municipalities, the 90th percentile response time ranged from a low of 5 minutes 50 seconds, to a high of 48 minutes 52 seconds.[56] Each of these municipalities at the extreme ends of the spectrum, would be seen as "meeting the standard" if they maintained

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[54] Sec. 42. (1)Ontario Regulation 501/97 Amended to O. Reg. 571/98

[55] The New Oxford Dictionary of English, 1998, Pg. 1812

[56] Unpublished undated survey by the Association of Municipal Emergency Medical Services of Ontario

these response times, despite the obvious disparity in service levels. In the calculation, the operator's response time performance is measured from the time the crew is notified of the call, until the time paramedics arrive on-scene. This represents only the ambulance service components of reaction and travel time. To obtain a truly representative EMS "system response time", an additional two minutes must be added to address call handling time lines used by Ministry of Health dispatch centres. In comparison to this flexible "standard", the industry (urban) standard is a 90th percentile response time of less than nine minutes from the time the call is received at the dispatch centre, until the time paramedics arrive on scene.[57]

With the previously documented provincial call and population growth, and the lack of historic service enhancement funding to address these issues, most municipalities suffered from response times well above the 1996 levels by the time they took over responsibility for ambulance service. Municipalities took exception to being forced to provide a level of service that was not already being provided by the Ministry of Health at the time of transition. In response to municipal pressure through AMO and the Land Ambulance Implementation Steering Committee (LAISC), the Ministry agreed to provide additional funding to help return response times to the 1996 baseline.

In late 2000, the province distributed a funding template defining land ambulance costs which were eligible for a 50% provincial grant. The template however, applied only to the

[57] Principles of EMS Systems, Pg. 115

level of ambulance service in existence on the day of assumption by the municipality. Although municipalities have completed numerous "best practices" template submissions to support their requests for both the base funding and 1996 response time issues funding, all are still waiting for Ministry funding to address 2001 and 2002 shortfalls. At the most recent LAISC meeting (July 29, 2002), the Ministry refused to indicate when such a funding announcement could be expected.

In light of serious response time issues and the ongoing Ministry procrastination, some municipalities chose to add resources notwithstanding, hoping to receive retroactive funding at a later date. Others chose to implement only the municipally funded 50% of planned enhancements, while the remainder refused to trust any predicted enhancement approvals and withheld improvements until funding was actually in hand. These varied approaches have obviously produced mixed results (and variations in Ministry cost-sharing percentages), some of which are described below.

A COMPARISON OF DEVOLUTION EFFECTS ON SAMPLE MUNICIPALITIES

Six Upper Tier Municipalities were selected for in depth reviews of the service and financial effects of LSR. The Region of Niagara and County of Middlesex were selected to represent Upper Tier Municipalities that had opted for "Contracting Out". The Regions of Durham, Halton, and Waterloo represented those municipalities choosing "Direct Delivery", while the County of Essex was selected as a hybrid utilizing both

"Direct Delivery" and "Contracting Out". All of the samples were participants in the province's OPALS (Ontario Pre Hospital Advanced Life Support) study providing the highest standard of patient care available, in at least a portion of each UTM. The six municipalities combined, represented a population of 2,509,379 (22% of the province's population) during the 2001 census.[58]

The municipalities polled, provided selected information for the calendar years 1996 - 2001. These years represent the two most recent census periods for population growth data, while 1996 was also used by the Ministry of Health and Long Term Care to set emergency response time standards. Where available, the information provided included total Population, the annual municipally-approved EMS expenditures, number of ambulance hours staffed and stations occupied, call volumes, and the Region-wide response time used to measure compliance with the legislated standard. Due to a lack of consistently accurate municipal population data by year, only Census data was used in the calculations. All data for the sample municipalities is detailed at Appendix V.

Due to service costs pre-devolution being mixed between multiple providers and across municipal boundaries and different fiscal years, it is sometimes difficult, if not impossible to determine true costs for a given Upper Tier Municipality during 1998. In three of the municipalities, i.e., Durham, Essex and Niagara, the major provider pre-transition was the

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[58] Calculated from Population and Dwelling Counts, for Canada, Provinces and Territories, and Census Divisions, 2001 and 1996 Censuses

Ministry of Health, and invoiced costs included a myriad of allocated but unconfirmed administrative costs from head office operations. At the same time, much of the overhead cost information was not provided (i.e., Ministry self-funded WSIB costs and other benefits). These services are similarly not included in the payment details provided in Public Accounts, so previous years' costs cannot be confirmed beyond the Ministry provided estimates. Many of these operations functioned out of stations built with Ministry funds on hospital property, and leased back to the operators at $1 a year. Upon transition, most hospitals either evicted ambulance operators or raised rents to reflect market value. The additional costs of acquiring new stations are reflected in 2001 municipal costs, but did not qualify for Ministry funding.

Regional Municipality of Durham

Durham Region had a 2001 Census population of 506,901. With ambulance service previously provided by a mixture of hospital, private and Ministry providers, Durham transitioned to municipal control on January 1, 2000. Since then, direct delivery has been provided by a division of the Public Health Department.

In 1998, the municipality was billed $9.5 million as the 100% cost of the existing provincially controlled ambulance service. This represented a per resident cost of $20.71 based on the 1996 Census population. The cost per patient carrying call (Code 1-4) was calculated at $293.01. The cost per hour of ambulance service provided was $81.46.

The 2001 cost of providing municipal ambulance service was $17.6 million (40% Ministry cost-share). This represented a per resident cost of $34.77 based on the 2001 Census population. The cost per patient carrying call (Code 1-4) was calculated at $424.23, and the cost per hour of ambulance service provided was $109.91. During the time period, Durham added 43,799 vehicle hours, a 37.6% increase in non cost-shared coverage.

County of Essex

Essex County had a 2001 Census population of 374,975. With ambulance service previously provided by a mixture of private, volunteer and Ministry providers, Essex transitioned to municipal control on January 1, 2001. Since then, a unique delivery scheme has existed with direct delivery being provided by a stand alone County department in the City of Windsor alone (The area covered by the previous Ministry service). The remainder of the County is covered by the three previous contractors (two private and one volunteer service).

In 1998, the municipality was billed $7.9 million as the 100% cost of the existing provincially controlled ambulance service. This represented a per resident cost of $22.63 based on the 1996 Census population. The cost per patient carrying call (Code 1-4) was calculated at $212.63. The cost per hour of ambulance service provided was $70.51.

The 2001 cost of providing municipal ambulance service was $16.0 million (46% Ministry cost-share). This represented a per resident cost of $42.70 based on the 2001 Census population. The cost per patient carrying call (Code 1-4) was calculated at $337.97, and the cost per hour of ambulance service provided was $135.13. During the time period, Essex added 6,049 vehicle hours, a 5.4% increase in non cost-shared coverage.

Regional Municipality of Halton

Halton Region had a 2001 Census population of 375,229. With ambulance service previously provided by a mixture of private and volunteer providers, Halton transitioned to municipal control on August 16, 2000. Since then, the hours provided by volunteers have been converted to paid hours. Direct delivery service is being provided as a division of the Health Department.

In 1998, the municipality was billed $4.7 million as the 100% cost of the existing provincially controlled ambulance service. This represented a per resident cost of $13.91. The cost per patient carrying call (Code 1-4) was calculated at $289.44. The cost per hour of ambulance service provided was $75.84.

The 2001 cost of providing municipal ambulance service was $9.7 million (32% Ministry cost-share). This represented a per resident cost of $25.84 based on the 2001 Census population. The cost per patient carrying call (Code 1-4) was calculated at $435.67, and

the cost per hour of ambulance service provided was $100.83. During the time period, Halton added 33,796 vehicle hours, a 54.2% increase in non cost-shared coverage.

County of Middlesex

Middlesex County had a 2001 Census population of 403,185. With ambulance service previously provided by a mixture of private contractors, Middlesex transitioned to municipal control on April 23, 2000. Since then, a single private contractor was selected in response to an RFP process. This contractor works under the supervision of the County Transportation and Emergency Services Department.

In 1998, the municipality was billed $8.6 million as the 100% cost of the existing provincially controlled ambulance service. This represented a per resident cost of $21.97 based on the 1996 Census population. The cost per patient carrying call (Code 1-4) was calculated at $241.62. The cost per hour of ambulance service provided was $94.47, although there is a question as to what percentage of budgeted hours were actually delivered.

The 2001 cost of providing municipal ambulance service was $12.4 million (51.8% Ministry cost-share when 100% First Nations and OPALS funding applicable for this municipality are incorporated). This represented a per resident cost of $32.02 based on the 2001 Census population. The cost per patient carrying call (Code 1-4) was calculated at $289.06, and the cost per hour of ambulance service provided was $139.05. During the

time period, Middlesex added 2,258 vehicle hours, a 2.5% increase in non cost-shared coverage.

Regional Municipality of Niagara

Niagara Region had a 2001 Census population of 410,574. With ambulance service previously provided by a mixture of hospital, private and Ministry providers, Niagara transitioned to municipal control on January 1, 2000. Since then, a single hospital contractor was selected in response to an RFP process. This contractor works under the supervision of the Niagara Region Health Department.

In 1998, the municipality was billed $9.2 million as the 100% cost of the existing provincially controlled ambulance service. This represented a per resident cost of $22.80 based on the 1996 Census population. The cost per patient carrying call (Code 1-4) was calculated at $253.55. The cost per hour of ambulance service provided was $85.19.

The 2001 cost of providing municipal ambulance service was $15.3 million (36.6% Ministry cost-share). This represented a per resident cost of $37.26 based on the 2001 Census population. The cost per patient carrying call (Code 1-4) was calculated at $318.75, and the cost per hour of ambulance service provided was $105.52. During the time period, Niagara added 37,000 vehicle hours, a 34.3% increase in non cost-shared coverage.

Regional Municipality of Waterloo

The Region of Waterloo had a 2001 Census population of 438,515. With ambulance service previously provided by a hospital and private provider, Waterloo transitioned to municipal control on December 3, 2000. Since then, direct delivery service has been provided as a division of the Public Health department.

In 1998, the municipality was billed $4.7 million as the 100% cost of the existing provincially controlled ambulance service. This represented a per resident cost of $11.70 based on the 1996 Census population. The cost per patient carrying call (Code 1-4) was calculated at $211.20. The cost per hour of ambulance service provided was $85.80.

The 2001 cost of providing municipal ambulance service was $6.7 million (49.3% Ministry cost-share). This represented a per resident cost of $15.27 based on the 2001 Census population. The cost per patient carrying call (Code 1-4) was calculated at $273.73, and the cost per hour of ambulance service provided was $114.35. During the time period, Waterloo added 3,274 vehicle hours, a 5.9% increase in non cost-shared coverage. Since 1998, Waterloo has had the advantage of an alternative non-emergency transportation brokerage known as "Med-Lift". This brokerage redirects calls not requiring an ambulance to selected public and private providers. "Med-Lift" currently transports approximately 4,000 Code-1 and 2 patients that otherwise would have travelled by ambulance. Since 1999, this service has been cost-shared by the Region and area hospitals.

SUMMARY OF SAMPLE MUNICIPALITY COSTS AND SERVICES

While the Ministry has used the average cost per call (Code 1-4+8) as its measure for charging back cross-boundary use of ambulance service between municipalities, the number of standby calls (Code 8s) can be artificially influenced by both CACC and ambulance service policy. As such, only potentially patient carrying calls were used in the comparison pre and post-transition. Since a base level of emergency coverage is required to maintain response times regardless of call volume generated, the most sensitive indicator of ambulance service cost, is the cost per hour of actual ambulance service provided. This cost is primarily driven by wage costs and the level of service being provided (i.e., primary or advanced care). All of the sample municipalities provided a degree of advanced care prior to transition, and all have increased the number of advanced care providers since. Similarly, all of the municipalities have added hours of ambulance service since the transition.

Between 1998-2001, all six sample municipalities had significant increases in cost per resident (30.5% - 88.7%), cost per Code 1-4 call (19.6% - 58.9%), and cost per hour of ambulance service provided (23.9% - 91.6%). The municipalities all added service hours (2.5% - 54.2% increases), with a mean increase of 23.3%. Call volumes (Codes 1-4) increased over the time period between 9.0% and 36.2% (mean of 26.5%). If the call volume redirected by Waterloo's "Med-Lift" is incorporated into this call growth, the range levels to 26.2% - 36.2%, for a mean increase of 29.5% across the municipalities.

Typically, if call volume increases, cost per call should decrease, all other things being equal, until utilization of existing resources is maximized. At that point, additional vehicles must be added and the cost per call and cost per resident climbs appropriately. Cost per hour is directly affected by wages, contractor profit, supply and equipment costs, the addition of ACPs, etc. Work to decrease response times includes adding vehicle hours, and may also involve adding stations. Cost per call and cost per resident climbs, although the cost per hour remains relatively constant so long as existing standards (e.g., % ACP coverage required) remain unchanged, except if stations are added. New station costs (e.g., debenture charges, rental and utility costs, etc.) will increase the cost per hour of service provided.

When compared to 1998, the 2001 call volume increase was essentially the same across the group. As such, the increase in service hours related to call growth, should have been similar. In fact, the three direct delivery services added 32.6% more service hours while the two contract services added 18.4%. The one combination service added 5.4% in hours.

Despite call volume growth, the cost per patient carrying call climbed 38.5% as a group, 51.0% for direct delivery services, 21.4% for contractors, and 35.1% for the combined service. This reflects not only the serious pre-existing under-resourcing, but the political realities of increasing demand for service where none existed, adding ACPs, etc.

When compared to 1998 costs for the entire group of sample municipalities, the 2001 cost per resident increased 65.2% as a group. The three direct delivery services climbed 33.5% while the two contract services rose 82.7%. The sole combination service cost per resident climbed 125.3%. Similarly, cost per hour of service increased 42.9% as a group, 31.8% for direct delivery services, 48.8% for contractors, and 64.4% for the combined service.

In summary, the municipal cost to provide ambulance service increased dramatically regardless of the service delivery option. Although call volume increases were similar (30.4% vs. 29.2% with Waterloo's "Med-Lift" factored in) across the sample municipalities, direct delivery services added significantly more service hours than contractors (32.6% vs. 18.4%), and yet had lower increases in cost per resident (33.5% vs. 82.7%) and cost per hour (31.8% vs. 48.8%). Cost per call was the only comparator where the contractor increase was less than that of direct delivery (21.4% vs. 51.0%). Unfortunately, the combination service was difficult to evaluate as its costs did not consistently fall between direct delivery and contractor as expected. In fact, its combination cost per resident and cost per hour were significantly higher than both other options. As only one sample municipality was considered, additional research is required to determine whether this finding can be repeated.

MODELING THE COST OF IMPROVEMENTS IN RESPONSE TIME

Despite making significant funding investments without the benefit of matching Ministry funding, none of our sample municipalities meet the industry nine minute gold standard. Three of the six sample municipalities still have 90th percentile emergency response times significantly above the 1996 standard (1 minute 19 seconds to 1 minute 32 seconds) in 2001. The cost to reach the 1996 levels will be significant in these and other municipalities province-wide. In Niagara and Halton Regions, where the 1996 levels have been successfully reached, unmatched annual UTM investments of $6.1 and $5.0 million respectively, were required since devolution.

In the industry's only documented work of its kind, Fischer, O'Halloran, et al in the Journal of Public Health Medicine[59], describe the use of an "Ambulance Response Curve" to estimate how much response time is reduced by deploying an additional ambulance, and then use the marginal cost of this deployment to estimate the opportunity cost of each second's improvement in response time.

The study utilizes a 1997-1998 data set from the Surrey Ambulance Service in the United Kingdom. The County of Surrey has a very stable population of 1.08 million (6.6% population growth between 1971-2000) with 15.8% of its population aged 65 years or

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[59] Ambulance Economics, PP. 413-421

older.[60] This compares with 2001 Ontario Census data indicating 12.9% of the provincial population is aged over 65.[61]

Fischer and O'Halloran report that each reduction of one second in response time, costs the service 28,000 British Pounds per year, with a standard error of approximately 4.2%.[62] With the current exchange rate of 1 British Pound equaling 2.43 Canadian Dollars[63], this translates to $68,040 Canadian per second of reduction.

If this marginal cost is in fact transferrable to the Ontario experience, Essex County (15 seconds) would require an additional maintained investment of $1.0 million, Middlesex (1 minute 19 seconds) $5.4 million, the Regions of Waterloo (1 minute 30 seconds) $6.1 million, and Durham (1 minute 32 seconds) $6.3 million to return 2001 response times to their 1996 levels.

In Halton Region where a 1 minute 11 second reduction has been accomplished since 2000 to comply with the 1996 standard (10:56 - 9:45), the formula would calculate a needed investment of $4.8 million per year. In fact, their investment of 5.0 million

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[60] Mid-Year Estimates of Population 2000, Surrey County Council Planning and Development Service

[61] Statistics Canada 2001 Census Analysis Series - Profile of the Canadian population by sex and age: Canada ages, Pg. 30

[62] Ambulance Economics, Pg. 418

[63] OANDA Currency Converter

annually represents $70,423 per second of improvement gained, but includes the cost of one additional station, and increased ACP staffing not covered in the Surrey scenario.

Similarly in Niagara Region, a 1 minute 17 second reduction (11:55 - 10:38) has been accomplished at a cost of $6.1 million annually, with the addition of three stations and similarly increasing ACP staffing. The Surrey formula estimates such a reduction as costing $5.2 million.

Both Regions appear to have received good value for their additional expenditures, which also included the conversion of volunteer and on-call hours to full-time in Halton and Niagara respectively.

The paper's authors take care to note that the "Ambulance Response Curve" model is specific to Surrey costs and conditions. Yet, the examples seem to confirm that marginal costs are remarkably similar between our two jurisdictions. In calculating the marginal cost of running an ambulance continuously (24/7) for a year, Fischer and O'Halloran utilized the cost of wages and benefits by paramedic level, added uniforms and vehicle leasing (which included maintenance and equipment), but did not include fuel or medical supplies, as demand was assumed not to increase simply with the addition of an ambulance. The marginal cost per year for each additional ambulance was estimated at

250,000 Pounds[64] ($607,500 Canadian) which is comparable to the $600,000 figure commonly used when estimating the cost of adding a 24/7 ambulance in Ontario.

There are differences between the costs used to calculate the Surrey model, and those of Ontario municipalities. The sample municipalities in Ontario have had to add stations to improve response times while the UK example does not include new building construction. Although the costs are included in both cases, Ontario municipalities purchase new vehicles and equipment, whereas Surrey leases both vehicles and equipment. Finally, the Surrey service controls its own resource movements (call volumes) by operating its own dispatch centre. In Ontario, low priority calls, standby coverage and other cross-boundary assistance calls are controlled by Ministry directed dispatch centres. As such, a municipal investment in service levels intended to reduce emergency response times locally, can be exploited by the Ministry for other means in their quest to maintain an integrated and seamless EMS system province-wide.

A key question would seem to be: Are we putting all our money in the right place? With a one minute reduction in actual on-road response time costing over $4.0 million (using the Surrey calculation), it is not difficult to imagine that use of available technology such as Automated Vehicle Locating (AVL) and appropriate Computer Aided Dispatch (CAD), along with appropriate staffing levels in our dispatch centres, could more economically reduce the overall response time by a minute or more. CACC dispatch time

[64] Ambulance Economics, Pg. 417

reductions should be seriously considered in concert with adding ambulance service resources to improve response times.

COMPETITION AND COMPENSATION

Prior to the devolution and realignment of ambulance responsibilities, the paramedic wage scale was essentially consistent across Ontario. Central bargaining for the crown agent services closely paralleled gains obtained by the Ontario Public Service (OPS) paramedics directly employed by the Ministry of Health and Long Term Care. These benchmarks accompanied by Ministry-imposed wage increase limits and their direct control of funding, effectively controlled annual wage increases across the province. In 1999, maximum hourly wages were standardized at approximately $20.00 for primary care and $22.00 for advanced care paramedics working for land ambulance services (with the exception of Toronto).[65] [66] As advanced care was perceived by the Province as an "experiment" outside of Toronto and Hamilton, only those twenty municipalities participating in OPALS[67], were allowed (and funded) to employ the higher standard (and higher paid) advanced care paramedics.

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[65] Land Ambulance Transition Practical Guide, Pg. 20

[66] Emergency Medical Services in the Regional Municipality of Waterloo, Pg. 42

[67] Burlington, Cambridge, Grimsby, Kingston, Kitchener-Waterloo, Lindsay, London, Mississauga, Niagara Falls, Oakville, Ottawa-Carleton, Peterborough, Port Colbourne, Port Hope/Coburg, St. Catharines, Sarnia, Sudbury, Thunder Bay, Welland and Windsor as shown in OPALS Study Communities

Since transition to municipal control, a number of issues have served to drive EMS wages upwards. Competition throughout the province for experienced ambulance staff at all levels is the result of municipalities attempting to both address the legislated response time standard, and provide service levels demanded by their taxpayers and elected officials, e.g., ambulance stations in communities that previously had none, 24-hour coverage where partial daily coverage existed, advanced care paramedics instead of solely primary care, etc.

This demand was compounded by a simultaneous change in the province's community college paramedic training programs. Ministry direction to add additional training elements and change the existing one year programs to two years, resulted in no PCP graduating classes in 2001... the initial year of municipal takeover and greatest demand. As advanced care training programs had their student numbers even more tightly restricted by the Ministry, ACPs were an even rarer, more valued commodity.

With municipal paramedic demand growing and no graduating class to fill the void, wages were initially increased by the GTA services to prevent a loss of their existing staff to Toronto EMS needs (traditionally the highest need and highest paid) and other services initiating or expanding their ACP programs. The effect snowballed with outlying services similarly raising their wages to retain and attract employees, and ultimately paramedics in more rural and remote Ontario moving to take these higher paying jobs in EMS growth communities.

> *The situation may at best be described as fluid, with many experienced personnel (particularly experienced paramedics) relocating from one municipality to another in order to take advantage of the current opportunities (oftentimes more than once).*[68]

Where only a year earlier, paramedic positions were at a premium, and full-time employment often meant five or more years of part-time work, or a position in the north far from friends and family, it was now a seller's market, with municipalities everywhere offering well paying full-time positions, relocation allowances, funding for education, etc. By late 2001, the GTA and surrounding area wages had settled to approximately $24.50 for primary care, and $27.25 for advanced care paramedics... a 20-25% increase over the pre-transition rates.

One very negative effect of this competition for personnel, has been the virtual abandonment of remote northern EMS positions. Experience in the Thunder Bay District "suggests that most paramedics prefer to work for a larger service, where there are greater opportunities for professional development and career advancement."[69] A number of services in the north are in desperate need of staff and have been forced to reduce coverage hours and in some cases, close stations altogether. Superior North EMS (The City of Thunder Bay operating as the ambulance delivery agent for the District of Thunder Bay) was forced to assume responsibility for contracted services in Nakina and Manitouwadge earlier this year, when contractors unable to fill paramedic vacancies,

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[68] External Review of Hamilton CACC, Pg. 7

[69] EMS Delivery Corporate Report No. 2002.159, Pg. 6

withdrew their services.[70] Superior North has resorted to flying in paramedics from southern Ontario to serve short-term locums in the needy areas.

Municipalities operating direct delivery services have also been faced with Job Evaluation (JE) process requirements built into their municipal collective agreements. As the responsibilities of paramedic staff (especially advanced care paramedics) are compared to other unionized municipal staff, upward pressure on municipal wage grids has been the norm. A recent, as yet unpublished JE result in southwestern Ontario, has been estimated to increase paramedic wages by 20% over the current GTA norms. As the new rates exceed those of Police officers and Firefighters, this increase has the potential of not only increasing EMS wages across Southern Ontario, but of increasing all emergency services wages in general.

THE EFFECTS OF DEVOLUTION ON THE PROVINCIAL EMERGENCY HEALTH SERVICES BRANCH

It has been noted that until 1978, the Emergency Health Services Branch of the Ministry of Health and Long Term Care had total control and funding responsibilities for all ambulance operations in Ontario. In addition, they directly operated ten land and five air ambulance services with their own employees. Beginning in 2000, the land operations were devolved to Upper Tier Municipalities as they assumed control of their local services. By the fall of 2001, all Ministry-operated air ambulance operations had been

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[70] EMS Delivery Corporate Report No. 2002.159, Pg. 5

privatized in response to a Request for Proposals call. The Ministry of Health and Long Term Care continues to directly operate 11 of the 19 Central Ambulance Communications Centres (CACCs) in the province,[71] and provides administrative system support through the Toronto head office and five geographically dispersed field offices. The Ministry is fully responsible for funding and providing all communications equipment, as well as funding air ambulance operations, first nations land ambulance services, and the provincial Base Hospital medical oversight programs.

Annual expenditures for the Emergency Health Services Branch are detailed in Appendix II. The information shown is a compilation of data published by the Ministry of Finance in the Public Accounts - Statement of Expenditures for the given fiscal years,[72] except for the 2001-2002 estimates which are produced by Management Board Secretariat[73].

The last fiscal year period during which the Ministry of Health had full funding (100%) and operational control of ambulance services was 1996-1997. During that year, $303.6 million were allotted to ambulance services in Ontario.[74] The next two fiscal periods were hybrids that combined partial years of 100% Ministry, 100% Municipal, and 50/50 Ministry/Municipal funding.

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[71] External Review of Hamilton CACC, Pg. 10

[72] Public Accounts of Ontario 1996-1997 through 2000-2001

[73] Expenditure Estimates for the Province of Ontario for the fiscal year ending March 31,2002

[74] Public Accounts 1996/97, Pg. 4-182

The 1999-2000 fiscal year was the first in which the 50/50 funding formula was fully in place. During that year, Ministry expenditures totalled $404.6 million,[75] climbed to $405.9 million in 2000-2001,[76] [77] and are estimated at $381.1 million in 2001-2002.[78] Even if the lowest, most current year's estimate is used, the resulting $77.5 million increase over 1996-1997 (25.5%), is still a gross underestimation of total system-wide costs. Remembering that 1996-1997 represented 100% funding by the Ministry, while the current year represents a supposed 50% (or less) contribution, the actual increase in the annual cost of providing ambulance service province-wide is at least $112.2 million.[79] This is a 37% increase in annual costs since the last year of full Ministry control.

There is however, an obvious error in the transfer payments shown in the 2001-2002 expenditure estimates as published by Management Board. Transfer payments to municipal ambulance operations are shown at $34.7 million[80] for the year... less than the $37.9 million shown for 1996-1997 [81] when only ten municipalities (primarily remote) and Metropolitan Toronto, operated ambulance services. Toronto's transfer payment of $35.7

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[75] Public Accounts 1999-2000, Pg. 4-191

[76] Public Accounts 2000-2001, Pg. 4-184

[77] due to one time transition costs and severance obligations

[78] Expenditure Estimates for the Province of Ontario for the fiscal year ending March 31, 2002, Pg. 19

[79] 2001-2002 municipal transfer (even though in error) payments X 2 [$69.4M] + balance of 2001-2002 EHS Expenditures [$346.4M] - EHS Total for 1996-1997 [$303.6M]

[80] Expenditure Estimates for the Province of Ontario for the fiscal year ending March 31, 2002, Pg. 19

[81] Public Accounts, 1996-1997, Pg. 4-183

million[82] made up the bulk of the payment in that year, and rose to $52.8 million in 2000-2001[83]... more than the total provincial amount estimated for 2001-2002. In fact, the transfer payments for our six sample municipalities, totalled almost $26 million in 2000-2001. With these municipalities representing 22% of the provincial population, the municipal transfer payment for the year should total at least $118 million.

If this $118 million estimate is inserted into the equation to calculate the 2001-2002 actual cost of operating ambulance services province wide, [84] annual costs actually increased some $295.5 million in 2001-2002 over that of 1996-1997... a 97% increase in annual costs.

Two other factors must be considered when measuring the true effect on the EHS branch. It was noted earlier that between 2000 and 2002, the Ministry of Health divested itself of its direct land and air ambulance operations. This should have resulted in an immediate and dramatic reduction in wage costs, albeit with a corresponding increase in transfer payments. While the total effects of the air ambulance privatization will not be shown until the next fiscal period (2002-2003), the portion of the EHS budget allocated to salaries, wages and benefits, continues to climb dramatically despite these changes. The

[82] Public Accounts, 1996-1997, Pg. 133

[83] Public Accounts, 2000-2001, Pg. 149

[84] 2001-2002 municipal transfer payments X 2 [$336M] + balance of 2001-2002 EHS Expenditures [$263.1M] - EHS Total for 1996-1997 [$303.6M]

2001-2002 estimated cost of $69.6 million as published in the Management Board Secretariat Expenditure Estimates[85], is a 52% increase over 2000-2001 ($45.8 million)[86], and a 32% increase over 1999-2000 ($52.6 million)[87], despite a reduction of approximately 700 operational staff.

When this published increase was questioned during a recent conversation between the author and the Branch's Financial Analyst[88], she stated that monies had been incorrectly allocated in the current estimates, and that some of the Salaries and Wages correctly belonged under Transfer Payments (This further confirmed our concerns about accuracy of the Transfer Payments costing). She refused to provide the correct amounts, but said they would be adjusted appropriately in the upcoming Public Accounts, Statement of Expenditures.[89]

If the 2001-2002 estimate for salaries, wages and benefits is in fact incorrect, the best available comparison would then be between fiscal years 1999-2000 and 2000-2001. In this time period, EHS salaries, wages and benefits dropped from $52.6 million to $45.8 million, a reduction of 13%.

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[85] Expenditure Estimates for the Province of Ontario for the fiscal year ending March 31, 2002, Pg. 19

[86] Public Accounts - 2000-2001, Pg. 4-185

[87] Public Accounts - 1999-2000, Pg. 4-192

[88] Telephone conversation with M. Wilcox, July 23, 2002

[89] Publication Expected: Fall, 2002

Despite numerous written and verbal requests for staffing information by Branch sections, EHS refused to provide the requested information for inclusion in this paper. As such, a rough modelling of EHS staffing levels was attempted from available information. Details are shown in Appendix VII.

The 1999-2000 (last available) Civil Service Commission Annual Report reported 8,570 employees at the Ministry of Health, representing 15.6% of a total Civil Service complement of 54,952.[90] No detail was provided regarding staff numbers assigned to each branch of the Ministry. The Report did provide data which allowed calculation of the percentage of the Civil Service paid in each ten thousand dollar salary range. When the $41.8 million shown in 1999-2000 EHS Expenditures for Salaries and Wages[91] was separated using these same percentages, a total complement of approximately 828 Full Time Equivalent employees was estimated at a mean annual salary of $50,500. This compares favourably to an overall Ministry of Health mean of $53,026 calculated by dividing the Ministry salaries and wages expenditure by the Civil Service Commission employee count.

Wage increases were limited by government policy to 2% in each of 2000-2001 and 2001-2002. Without increasing the number of staff, this should have raised overall EHS Salaries and Wages to $42.6 million in 2000-2001, and $43.5 million in 2001-2002. In

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[90] Civil Service Commission Annual Report - 1999-2000, Pg. 25

[91] Public Accounts - 1999-2000, Pg. 4-192

fact, the estimated Salaries and Wages for 2001-2002 are reported by Management Board Secretariat as $58.2 million[92], a 39.2% increase over 1999-2000. When the 2% increase for each year, is applied to the mean annual salary previously calculated, a new mean of $51,510 is calculated for 2000-2001, with a mean of $52,540 for 2001-2002.

When the 2001-2002 mean wage is divided into the $58.2 million annual total as estimated, a complement of approximately 1,107 Full Time Equivalent employees results. This would represent a staff increase of 279 employees (33.7%) within the EHS Branch despite a reduction of ten land and five air ambulance services with their respective employee complements.

Given the Branch's claim that the 2001-2002 Expenditure Estimates are incorrect, EHS staffing was estimated for the 2000-2001 year as well. When the 2000-2001 mean wage of $51,510 is divided into the $35.4 million salaries and wages allotment[93], a complement of approximately 687 employees (a calculated reduction of 141 full time equivalents from our 1999-2000 estimate of 828 FTEs) is revealed. As the Branch verbally claims a reduction of 641 staff (602 paramedics, 23 managers and 16 administrative staff) through the devolution of Ministry-operated land ambulance services[94], the actual 2000-2001

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[92] Expenditure Estimates for the Province of Ontario for the fiscal year ending March 31,2002, Pg. 19

[93] Public Accounts - 2000-2001, Pg. 4-185

[94] Telephone conversation with M. Wilcox, July 23, 2002

complement should be no more than 187 employees... a 500 employee difference, unless positions have been added in the remaining sections of the Branch.

With devolution of the Ministry's land ambulance services occurring at various times during 2000, a more forgiving estimate would leave these employees with the Branch until the end of the year (nine months into the 2000-2001 fiscal year). 75% (nine-twelfths) of the annual mean wage for the year is $38,633. When multiplied by the number of staff ultimately devolved (641), those staff represent $24.8 million in wages, leaving $10.6 million in annual wages for the staff remaining at the Branch. When this $10.6 million is divided by the mean wage for the full year ($51,510), a calculated complement of approximately 206 employees remains. This represents a calculated increase of 19 employees ($978,690) despite the devolution of responsibility for at least 641 staff members to municipalities.

There are obviously numerous areas where the accuracy of this modelling can be challenged. To most accurately represent the effect on Emergency Health Services Branch, true staffing levels by operational section of the Branch are necessary. The Ministry's marginal release of information does not match anecdotal and other information available. The union representing OPS staff, released information that "more than 100 OPSEU members face(d) layoff as a result of the privatization" of Ministry air ambulance operations[95]. OPSEU further estimated the cost of legislated severance for

[95] Privatized air ambulance will "Walkertonize" the skies, OPSEU says

"classified" (full-time permanent) air ambulance staff at approximately $1.6 million.[96] Further details are necessary to factor in severance for the 641 devolved land ambulance staff that the Ministry admits to.

Another issue of concern is the effect of the industry's strong part-time staffing contingent on Ministry numbers. While all staff numbers presented have been assumed to be full-time equivalents, there is no confirmation of this. Our modelling appears to indicate slightly more than 200 employees remaining at the Branch, yet anecdotal information from CACC staff, indicates their understanding that there are over 300 staff employed in dispatch operations alone. The recent IBI "External Review of Hamilton CACC" appears to support this with its description of approved staffing complements for three of the Ministry's eleven dispatch centres: Hamilton [97], Barrie[98], and London[99] totalling 91 FTEs. Even if the eight remaining CACCs averaged only 15 FTEs each, this would still amount to an additional 120 FTEs for a total of 211 staff assigned to CACCs alone. Obviously, clarification is necessary.

Unfortunately, with only minimal information provided by the Ministry, a truly accurate picture cannot be assured. With the information available to us, it does appear that the

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[96] Air Ambulance Fact Sheet #1

[97] External Review of Hamilton CACC, Pg. 23

[98] Ibid, Pg. C-6

[99] Ibid, Pg. C-8

annual cost of providing provincial ambulance service has almost doubled (97% increase) since the last year of full Ministry control. It also appears that despite the devolution of hundreds of paramedics and support staff as well as all land ambulance operational responsibilities to municipalities, the now primarily administrative Branch continues to grow significantly.

CONCLUSION

This paper has documented the transition of ambulance services from provincial to municipal control, described the effects of this devolution on municipalities and the provincial Emergency Health Services Branch, and compared direct delivery operations to those of contracted providers. But did this devolution fulfill the "Who Does What" objectives originally set out? Did it result in a more efficient, accountable, less costly and simplified government that saved taxpayers money, while sorting out which level of government should best deliver ambulance service?

I think not. Although the service was definitely under-resourced historically based on call volume growth, and has had service levels increased dramatically since 1998,[100] the cost of providing ambulance service in Ontario has almost doubled since devolution to municipalities. The EHS bureaucracy continues to grow despite a loss of most operational responsibilities. Rather than clearly devolving responsibilities, many have become duplicate efforts between the municipalities and the Province. Local

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[100] 23% increase in hours provided in our sample shown at Appendix VI

accountability has improved for some aspects of the service, but become more confused for others. There is certainly not one level of government responsible for spending decisions and funding responsibility.

Subsidiarity is the principle that a central authority should have a subsidiary function, performing only those tasks which cannot be performed at a more local level[101]... the view that public services are most efficiently and effectively delivered by the most local level of government capable of providing them. Emergency services have typically been seen as worthy of the most local control possible. Police Services Boards and the insistence of local municipalities to maintain control of fire departments, are two very significant examples. The understanding of unique local needs and priorities, being able to address them without regard for the provincial "flavour of the month", yet being fully accountable through locally elected officials, enhances the provision of all local emergency services. Yet, in an unpublished draft, Sancton suggests a difference in public opinion when it comes to municipal ambulance services:

> *many people view health as a provincial responsibility and fire as municipal. Such people would not support municipalities taking over ambulance if the result were that poorer areas of the province would be forced to reduce their own levels of service. This problem could be overcome by high levels of provincial funding and regulation, although the argument would then be that such provincial involvement would mean an excessively entangled system the accountability of which would be insufficiently clear.*[102]

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[101] The New Oxford Dictionary of English, 1998, Pg. 1851

[102] Chapter 8 - Emergency Services - Unpublished Draft

As described throughout the paper, this is exactly what has happened in Ontario. What was needed was a mechanism to add elements of openness, local accountability, control and flexibility to the existing provincial ambulance system. But instead of admitting and addressing weaknesses in the system and regional disparities in funding and service levels, the Ministry chose to challenge the documented needs, control the funding and hide behind their own statistics until release was forced. They chose a similar controlling tactic with their refusal to provide what should have been public information for this paper.

The devolution of ambulance services to municipal control was a political decision, then and now strenuously opposed by the bureaucrats in EHS. What may have started as a means to fill part of the education tax gap, served to expose the provincial ambulance system as seriously under-resourced and struggling under province-wide increases in both emergency calls and non-emergency transfers as the population both ages and ails.

Rather than being a key partner in the province's rationalization of hospital services through timely movement of patients to tertiary care and diagnostic facilities, the existing ambulance system is often the main culprit in missed appointments, failure to free up acute care hospital beds, and the inability to admit Emergency Department patients to hospital. This failure to provide routine transportation needs, ultimately prevents

ambulances from offloading patients requiring emergency care at hospital... A giant transportation "merry-go-round" affecting the most basic abilities of the health care system to function the way it must.

Municipalities have been forced to address local EMS needs in ways never previously attemped by the Ministry. Significant municipal resources have been added in an attempt to reduce response times and meet new provincially set standards. But when it was identified that their own CACCs were not operating up to similar standards, the Ministry simply removed any reference to the dispatch standard from legislation. Improving dispatch through updated technology and appropriate staffing was, and still is, an excellent and cost-effective means of improving system-wide response times.

Municipal political pressure to add advanced care paramedics, has overridden the province's view of this high level of patient care as but an "experiment". Where wage scales were once tightly controlled, the marketplace has now determined wages based on tight supply and high demand. This has divided the province into "have" and "have not" regions with regards to ambulance service. We are seeing the beginnings of this division with our current northern paramedic shortages. Where a seamless system across municipal boundaries once existed, there are now concerns about using one's own highly valued resources to service a neighbouring under-resourced municipality. Maintaining the seamless nature of a provincial ambulance system will be a significant challenge in the future.

The guiding principles for the devolution of ambulance services were intended to maintain a system that was at once Accessible, Integrated, Seamless, Accountable and Responsive. Unfortunately, what has been gained in local accountability and responsiveness, has been lost in reduced accessibility, health system integration and seamlessness. Residents of "have" municipalities will continue to benefit from the devolution as their service needs are identified and service levels improved. "Have not" municipalities however, will continue to view EMS as an unwanted downloading and maintain the same substandard service levels as before. The issue now will be finding and affording the paramedics needed to provide even this level of service.

APPENDIX I -Distribution of Ambulance Service Delivery Models by Land Ambulance Service Area, Effective July, 2002

Land Ambulance Service Area	Delivery Model
City of Cornwall (for The United Counties of Stormont, Dundas & Glengarry)	Direct
City of Greater Sudbury	Direct
City of Hamilton	Direct
City of Kawartha Lakes	Contract (Direct Delivery as of January 1, 2003)
City of Ottawa	Direct
City of Toronto	Direct
County of Brant	Direct
County of Bruce	Direct
County of Dufferin	Contract
County of Elgin	Contract
County of Essex/City of Windsor	Direct (1), Contract (3)
County of Frontenac	Contract
County of Grey	Contract
County of Haldimand	Direct
County of Haliburton	Direct
County of Hastings	Contract (Direct Delivery as of January 1, 2003)
County of Huron	Direct
County of Lambton	Direct
County of Lanark	Contract
County of Leeds and Grenville	Direct
County of Lennox and Addington	Contract
County of Middlesex	Contract
County of Norfolk	Direct
County of Northumberland	Contract
County of Oxford	Direct
County of Perth	Direct
County of Peterborough	Direct
County of Prince Edward	Contract
County of Renfrew	Contract
County of Simcoe	Contract
County of Wellington	Contract
United Counties of Prescott and Russell	Direct
District of Algoma	DSSAB - Direct
District of Cochrane	DSSAB - Direct (1), Contract (6) (All Direct when existing contracts expire)

District of Kenora	DSSAB - Direct
District of Manitoulin/Sudbury	DSSAB - Contract (3)
District of Muskoka	Contract
District of Nipissing	DSSAB - Contract
District of Rainy River	DSSAB - Contract (2)
District of Sault Ste. Marie	DSSAB - Contract
District of Thunder Bay	Direct (1), Contract (5) (All Direct as of January 1, 2003)
District of Timiskaming	DSSAB - Contract (3)
Municipality of Chatham-Kent	Contract
Town of Parry Sound	Contract (3)
Region of Durham	Direct
Region of Halton	Direct
Region of Niagara	Contract
Region of Peel	Contract (2)
Region of Waterloo	Direct
Region of York	Direct

[103]

[103] Compiled from EMS Municipal Organizational Chart - Association of Municipal Emergency Medical Services of Ontario, July, 2002, Emergency Health Services Branch Directory of Ambulance System Services, February 27, 2002, and EMS Service Delivery Corporate Report 2002.159, City of Thunder Bay, May 17, 2002

APPENDIX II - Emergency Health Services Branch Expenditures by Fiscal Year

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-Estimated
EHS Total Expenditures	$303,646,579	$327,516,892	$298,930,588	$404,582,264	$405,913,277	$381,122,100
Salaries/Wages	$ 38,273,490	$ 46,367,594	$ 39,852,290	$ 41,806,540	$ 35,407,382	$ 58,171,900
Benefits	$ 6,837,927	$ 10,938,897	$ 9,137,793	$ 10,777,630	$ 10,430,809	$ 11,455,100
TOTAL S/W & B	**$ 45,111,417**	**$ 57,306,491**	**$ 48,990,083**	**$ 52,584,170**	**$ 45,838,191**	**$ 69,627,000**
Benefits as a % of S/W & B	15.2%	19.1%	18.7%	20.5%	22.8%	16.5%
Municipal Transfer Payments	$ 37,908,782	$ 31,125,496	$ 10,722,342	$ 56,587,482	$128,608,390	$ 34,727,300
Other Transfer Payments	$180,843,369	$197,573,264	$203,604,030	$244,188,842	$177,101,769	$215,529,900
TOTAL Transfer Payments	**$218,752,151**	**$228,698,760**	**$214,326,372**	**$300,776,324**	**$306,710,159**	**$250,253,200**
LSR Transition Repayment			($166,000,000)		($ 57,000,000)	
Appropriation	$317,324,800	$329,230,700	$309,368,000	$405,841,300	$433,234,400	$381,122,100
Actual	$303,646,579	$327,516,892	$298,930,588	$404,582,264	$405,913,277	
SURPLUS	**$ 13,678,221**	**$ 1,713,808**	**$ 10,437,412**	**$ 1,259,036**	**$ 27,321,123**	

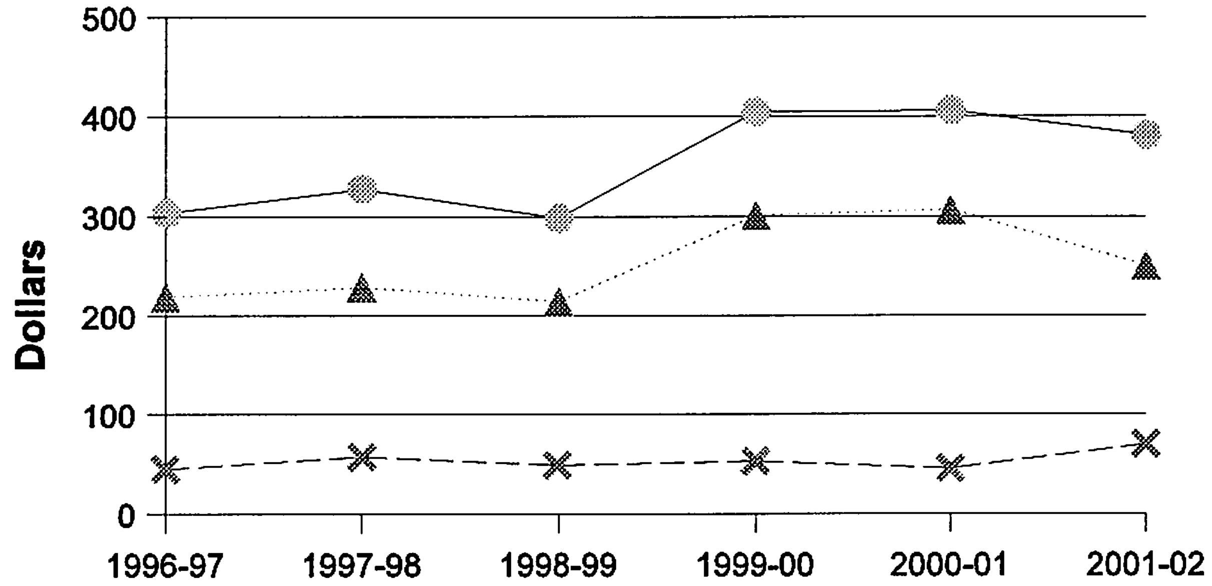
Figure II-1: EHS Expenditures by Fiscal Year
Dollars
500
400
300
200
100
0
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
Legend
EHS Total Expenditures
ESH Salaries, Wages o/ Benefits
Total Transfer Payments

APPENDIX III - EHS Transfer Payments to Regional Municipality of Waterloo Ambulance Services

Table III-1

	1996-1997	**1997-1998**	**1998-1999**	**1999-2000**	**2000-2001**	**2001-2002 Estimated**
RMOW T/P	N/A	N/A	N/A	N/A	$ 1,907,027	
CMH T/P*	$ 1,776,044	$ 1,985,931	$ 1,855,970	$ 2,344,604	$ 1,941,961	
KWRA T/P**	$ 2,630,256	$ 3,186,744	$ 3,224,847	$ 3,893,101	$ 2,315,361	
TOTAL T/P	$ 4,406,300	$ 5,172,675	$ 5,080,817	$ 6,237,705	$ 6,164,349	
Less CMH BH T/P***			$ 539,832	$ 828,027	$ 901,302	
TOTAL EMS T/P			**$ 4,540,985**	**$ 5,409,678**	**$ 5,263,047**	

* Cambridge Memorial Hospital
** Kitchener Waterloo Regional Ambulance (1987) Inc.
*** Base Hospital T/P calculated by year-end CMH ambulance service actuals subtracted from total CMH EHS transfer payment

Table III-2

	1996	1997	1998	1999	2000	2001
CMH Budget*		$ 1,137,792**	$ 1,246,817	$ 1,378,769		
KWRA Budget***		$ 2,612,479**	$ 2,971,665	$ 3,146,930		
TOTAL Budget		**$ 3,750,271**	**$ 4,218,482**	**$ 4,525,699**		
CMH Final Exp.		$ 1,152,200				
KWRA Final Exp.		$ 2,614,430				
RMOW Budget			$ 4,332,000	$5,032,000****	$5,071,500****	$ 6,785,424****
RMOW Actual			$ 4,744,838	$ 5,301,597	$ 5,935,088	$ 6,697,969
RMOW Repayment to Ministry of Health			$ 4,744,838	$ 2,531,140	$ 2,240,301	$ 3,299,653

* Cambridge Memorial Hospital EMS budget only
** Based on nine months of 1997/98 budget, calendarized
*** Kitchener Waterloo Regional Ambulance (1987) Inc. budget only
**** Includes Med-Lift and administration costs

APPENDIX IV - Provincial EHS Annual Statistics

Table IV-1

Provincial Call Volume	1996	1997	1998	1999	2000	2001
Code-1	202,267	223,575	227,726	227,163	223,549	214,770
Code-2	77,820	74,540	76,558	82,498	89,202	88,339
Code-3	224,616	241,002	260,732	256,552	256,592	273,700
Code-4	381,608	407,048	432,411	454,912	489,470	543,461
Code-8	232,941	248,552	264,163	237,421	254,600	340,820
Code 1-4	886,311	946,165 (+6.75%)	997,427 (+5.42%)	1,021,125 (+2.38%)	1,058,813 (+3.69%)	1,120,270 (+5.80%)
Code 1-4+8	1,119,252	1,194,717 (+6.74%)	1,261,590 (+5.60%)	1,258,546 (-0.25%)	1,313,413 (+4.36%)	1,461,090 (+11.24%)

Table IV-2

	1996	1997	1998	1999	2000	2001
Population (July 1)	10,642,800	11,249,500	11,387,300	11,522,700	11,685,300	11,874,400
EHS Exp (Fiscal)	$303,646,579	$327,516,892	$298,930,588	$404,582,264	$405,913,277	$381,122,100
EHS $/Resident	$28.53	$29.11	$26.25	$35.11	$34.73	$32.10
EHS $/C1-4 call	$342.72	$346.21	$299.83	$396.26	$383.30	$340.29
EHS $/C1-4+8 call	$271.36	$274.07	$236.87	$321.35	$309.15	$260.86

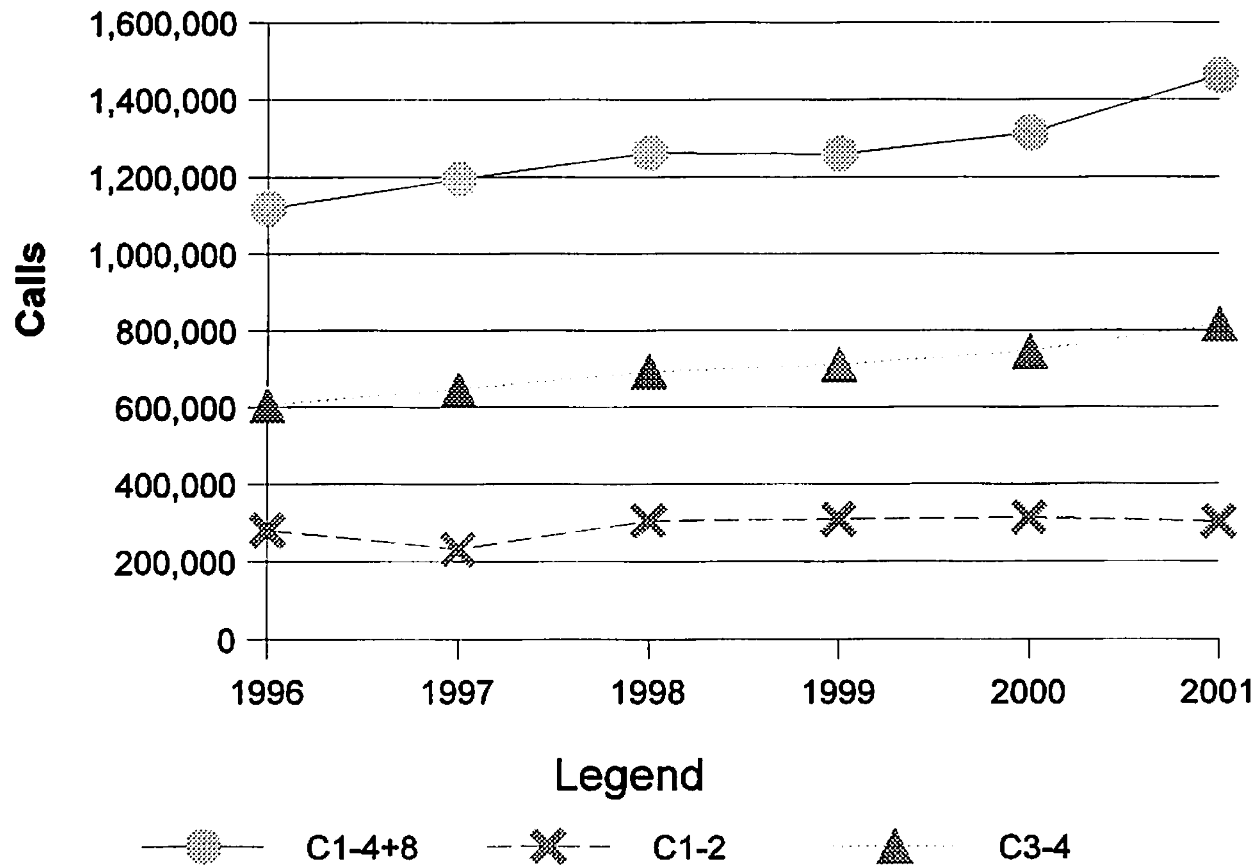
Figure IV-1: Provincial Call Volume
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Calls
1996
1997
1998
1999
2000
2001
Legend
C1-4+8
C1-2
C3-4

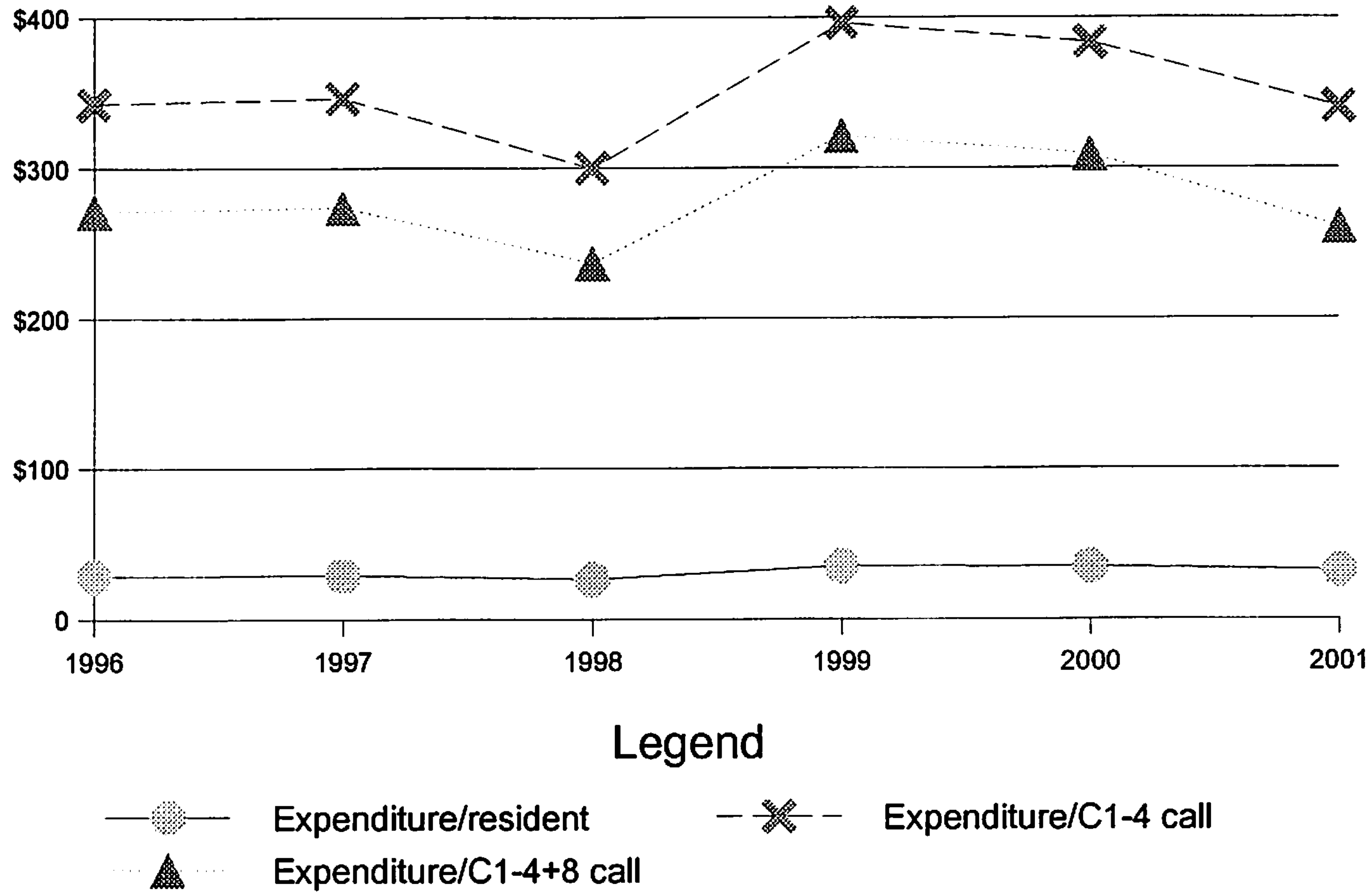
Figure IV-2: EHS Expenditures Per Call and Resident
$400
$300
$200
$100
0
1996
1997
1998
1999
2000
2001
Legend
Expenditure/resident
Expenditure/C1-4 call
Expenditure/C1-4+8 call

APPENDIX V - Expenditures and Performance Indicators by Sample Municipalities

Table V-1

DURHAM	1996	1997	1998	1999	2000	2001
Population	472,800 (458,616*)	483,100	495,600	505,400	518,000	531,000 (506,901*)
Municipal Cost			$9,497,000**	$9,279,819	$14,049,205-33%Ministry	$17,625,397-40% Ministry
Vehicle Hours			116,586	134,104	142,029	160,365
Regionwide T2-T4	9:46	9:34	9:47	10:12	10:50	11:18
C1-4 Call Volume	28,879	29,955	32,412	33,552	37,093	41,547
C8 Call Volume	4,998	4,559	5,388	6,058	7,414	10,944
C1-4+8 Call Volume	33,877	34,514	37,800	39,610	44,507	52,491
Cost per Resident			$20.71			$34.77
Cost per C1-4 Call			$293.01			$424.23
Cost per Hour			$81.46			$109.91
Stations Occupied	9	9	9	9	9	9

* Population and Dwelling Counts - 2001 and 1996 Censuses

** Pg. 15 - Land Ambulance Service Review - Durham, York & Halton (Includes Vehicle and Equipment Replacement Costs)

Table V-2

ESSEX	1996	1997	1998	1999	2000	2001
Population	350,329*					360,032 (374,975*)
Municipal Cost			$7,929,077**			$16,012,830-46% Ministry
Vehicle Hours			112,448	112,448	112,448	118,497
Regionwide T2-T4	10:24	10:34	10:39	10:51	10:33	10:39
C1-4 Call Volume	33,912	34,634	37,291	42,311	45,231	47,379
C8 Call Volume	4,209	4,780	8,561	13,429	18,493	15,158
C1-4+8 Call Volume	38,121	39,414	45,852	55,740	63,794	62,537
Cost per Resident			$22.63			$42.70
Cost per C1-4 Call			$212.63			$337.97
Cost per Hour			$70.51			$135.13
Stations Occupied			10	10	10	12

* Population and Dwelling Counts - 2001 and 1996 Censuses

** As obtained from the Land Ambulance Services (Essex County, Windsor and Pelee Island) Year 2000 Report - March, 1999

Table V-3

HALTON	1996	1997	1998	1999	2000	2001
Population	339,875*	346,794	355,089	363,703	374,900	387,200 (375,229*)
Municipal Cost			$4,729,180	$5,301,200	$7,398,952	$9,695,795-32% Ministry
Vehicle Hours	62,359**	62,359**	62,359**	65,487**	87,386***	96,155****
Regionwide T2-T4	10:19	10:24	10:29	10:56	10:37	9:45
C1-4 Call Volume	14,716	15,480 (+5.19%)	16,339 (+5.55%)	17,652 (+8.04%)	19,600 (+11.04%)	22,255 (+13.55%)
C8 Call Volume	7,605	9,427	8,893	9,945	11,409	14,976
C1-4+8 Call Volume	22,321	24,907	25,232	27,597	31,009	37,231
Cost per Resident			$13.91			$25.84
Cost per C1-4 Call			$289.44			$435.67
Cost per Hour			$75.84			$100.83
Stations Occupied	6	6	6	6	6	7

* Population and Dwelling Counts - 2001 and 1996 Censuses
** Included volunteer hours
*** Full Time staffing replaced volunteer hours
**** 8,760 hours not implemented due to staffing difficulties

Table V-4

MIDDLESEX	1996	1997	1998	1999	2000	2001
Population	389,616*					403,185*
Municipal Cost			$8,558,823**	$8,771,114	$12,151,000	$12,911,832- 51.8% Ministry
Vehicle Hours			90,600***	90,600***	90,600	92,858
Regionwide T2-T4	9:30	10:08	10:37	11:05	11:26	10:49
C1-4 Call Volume	29,817	34,833	35,423	37,210	44,251	44,669
C8 Call Volume	10,420	13,033	16,026	15,839	9,889	3,830
C1-4+8 Call Volume	40,337	47,866	51,449	53,049	54,140	48,499
Cost per Resident			$21.97			$32.02
Cost per C1-4 Call			$241.62			$289.06
Cost per Hour			$94.47			$139.05
Stations Occupied			5	5	9	9

* Population and Dwelling Counts - 2001 and 1996 Censuses

** Pg. 120 - Land Ambulance Service Review - Southwestern Ontario Municipalities (Includes Vehicle and Equipment Replacement Costs)

*** Budgeted vehicle hours, but not being provided by the existing Ministry contractor

Table V-5

NIAGARA	1996	1997	1998	1999	2000	2001
Population	403,504*					425,000 (410,574*)
Municipal Cost			$9,200,000	$9,200,000	$11,000,000	$15,300,000-36.6% Ministry
Vehicle Hours			108,000**	108,000**	116,000	145,000
Regionwide T2-T4	10:47		11:20	11:55	11:47	10:38
C1-4 Call Volume			36,285			48,000
C8 Call Volume			13,705			12,000
C1-4+8 Call Volume			49,990			60,000
Cost per Resident			$22.80			$37.26
Cost per C1-4 Call			$253.55			$318.75
Cost per Hour			$85.19			$105.52
Stations Occupied			10			13

* Population and Dwelling Counts - 2001 and 1996 Censuses

** + 16,000 hours of overnight standby coverage

Table V-6

WATERLOO	1996	1997	1998	1999	2000	2001
Population	423,800 (405,435*)	429,800	436,200	442,300	450,900	458,600 (438,515*)
Municipal Cost			$4,744,838	$5,301,597 - 47.7% Ministry	$5,935,088 - 37.7% Ministry	$6,697,969 - 49.3% Ministry
Vehicle Hours			55,302	55,302	56,710	58,576
Regionwide T2-T4	10:30	10:21	10:51	11:12	11:21	12:00
C1-4 Call Volume	20,813	21,829	22,446	22,578	23,259	24,469
C8 Call Volume	8,092	9,643	9,254	9,993	9,909	10,747
C1-4+8 Call Volume	28,905	31,472	31,970	32,571	33,168	35,216
Cost per Resident			$11.70			$15.27
Cost per C1-4 Call			$211.20			$273.73
Cost per Hour			$85.80			$114.35
Stations Occupied	5	5	5	6	6	6

* Population and Dwelling Counts - 2001 and 1996 Censuses

APPENDIX VI - 2001-1998 Cost Comparison by Sample Municipalities and Provider Type

	1998 Cost per Resident	1998 Cost per Code 1-4 Call	1998 Cost per Hour of Ambulance Service	2001 Cost per Resident (% Increase 2001-1998)	2001 Cost per Code 1-4 Call (% Increase 2001-1998)	2001 Cost per Hour of Ambulance Service (% Increase 2001-1998)	2001-1998 Increase in Hours of Amb Service (% Increase)	2001-1998 Increase in Code 1-4 Call Volume (% Increase)
Durham	$20.71	$293.01	$81.46	$34.77 (67.9%)	$424.23 (44.8%)	$109.91 (34.9%)	43,799 (37.6%)	7,135 (28.2%)
Essex	$22.63	$212.63	$70.51	$42.70 (88.7%)	$337.97 (58.9%)	$135.13 (91.6%)	6,049 (5.4%)	10,088 (27.1%)
Halton	$13.91	$289.44	$75.84	$25.84 (85.8%)	$435.67 (50.5%)	$100.83 (33.0%)	33,796 (54.2%)	5,916 (36.2%)
Middlesex	$21.97	$241.62	$94.47	$32.02 (45.7%)	$289.06 (19.6%)	$139.05 (47.2%)	2,258 (2.5%)	9,246 (26.1%)
Niagara	$22.80	$253.55	$85.19	$37.26 (63.4%)	$318.75 (25.7%)	$105.52 (23.9%)	37,000 (34.3%)	11,715 (32.3%)
Waterloo	$11.70	$211.20	$85.80	$15.27 (30.5%)	$273.73 (29.6%)	$114.35 (33.7%)	3,274 (5.9%)	2,023* (9.0%)
ALL	**$18.95**	**$250.24**	**$82.21**	**$31.31 (65.2%)**	**$346.57 (38.5%)**	**$117.47 (42.9%)**	**(23.3%)**	**(26.5%)**

	1998 Cost per Resident	1998 Cost per Code 1-4 Call	1998 Cost per Hour of Ambulance Service	2001 Cost per Resident (% Increase 2001-1998)	2001 Cost per Code 1-4 Call (% Increase 2001-1998)	2001 Cost per Hour of Ambulance Service (% Increase 2001-1998)	2001-1998 Increase in Hours of Amb Service (% Increase)	2001-1998 Increase in Code 1-4 Call Volume (% Increase)
Direct Delivery				$25.29 (33.5%)**	$377.88 (51.0%)**	$108.36 (31.8%)**	(32.6%)	(24.5%)
Contracted				$34.63 (82.7%)**	$303.91 (21.4%)**	$122.29 (48.8%)**	(18.4%)	(29.2%)
Combined				$42.70 (125.3%)**	$337.97 (35.1%)**	$135.13 (64.4%)**	(5.4%)	(27.1%)

* Waterloo's call volume increase is artificially lowered due to implementation of "Med-Lift", an alternate non-emergency patient transportation system, beginning in 1998 (Regionally funded beginning in 1999). By 2001, the program was diverting 4,000 low priority calls per year away from ambulance. If "Med-Lift" call volume is incorporated, the 2001 over 1998 increase in call volume is 6,023 or 26.8%.

** % increase 2001 by provider type, compared to 1998 for all providers (as all providers were similarly funded and controlled by the Ministry).

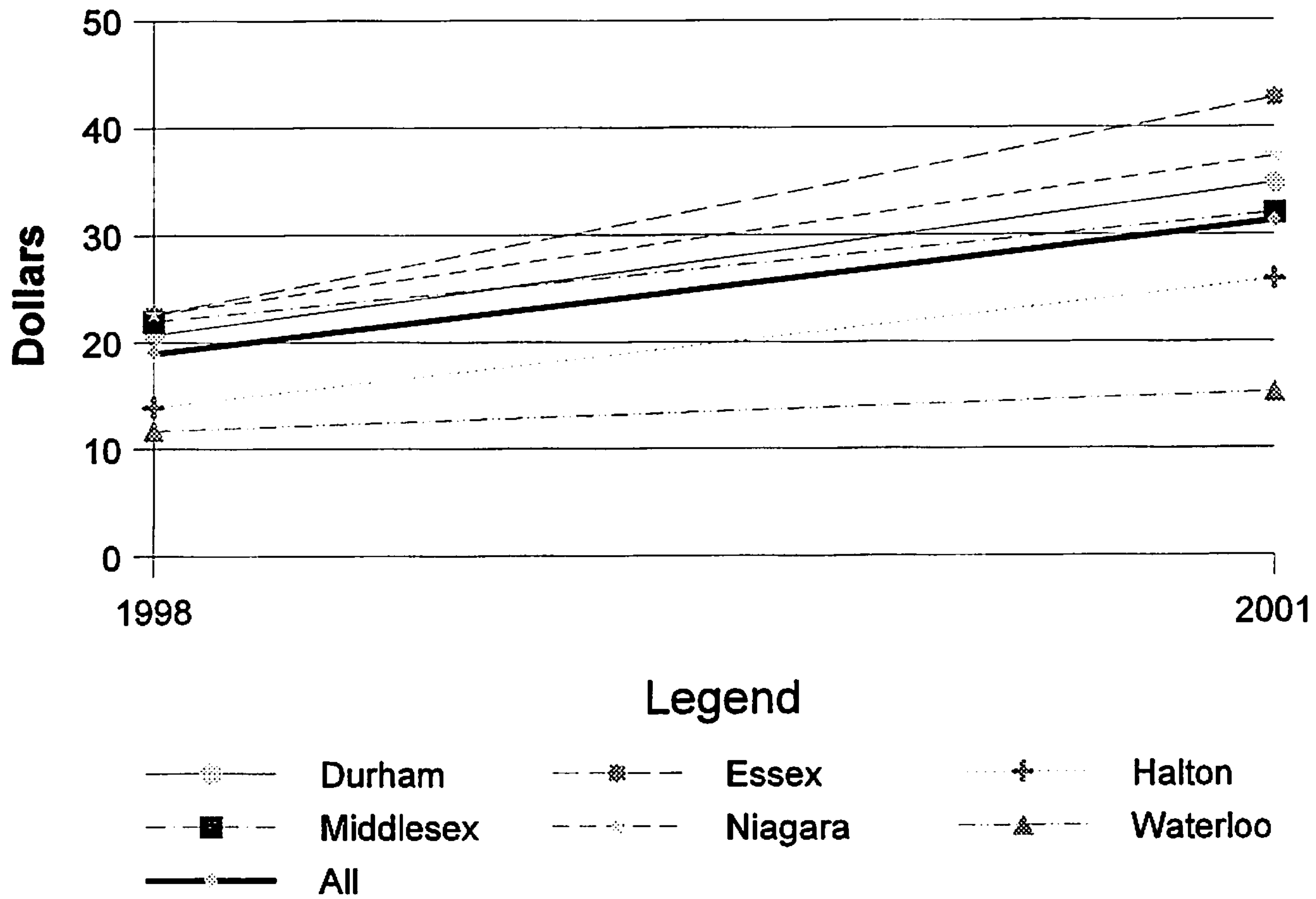
Figure VI-1: Cost per Resident by Upper Tier Municipality
50
40
30
20
10
0
Dollars
1998
2001
Legend
Durham
Essex
Halton
Middlesex
Niagara
Waterloo
All

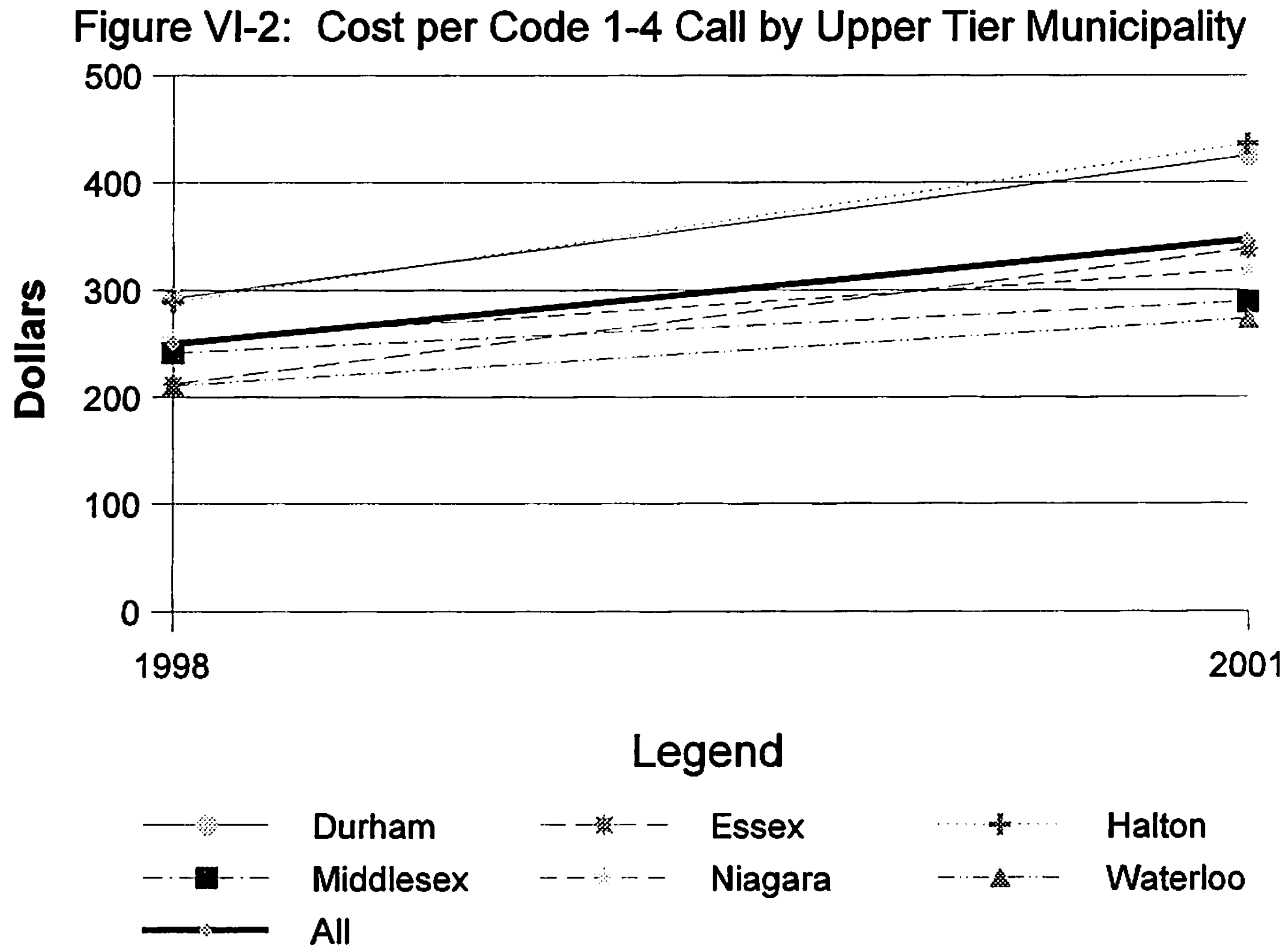
Figure VI-2: Cost per Code 1-4 Call by Upper Tier Municipality
500
400
300
200
100
0
Dollars
1998
2001
Legend
Durham
Essex
Halton
Middlesex
Niagara
Waterloo
All

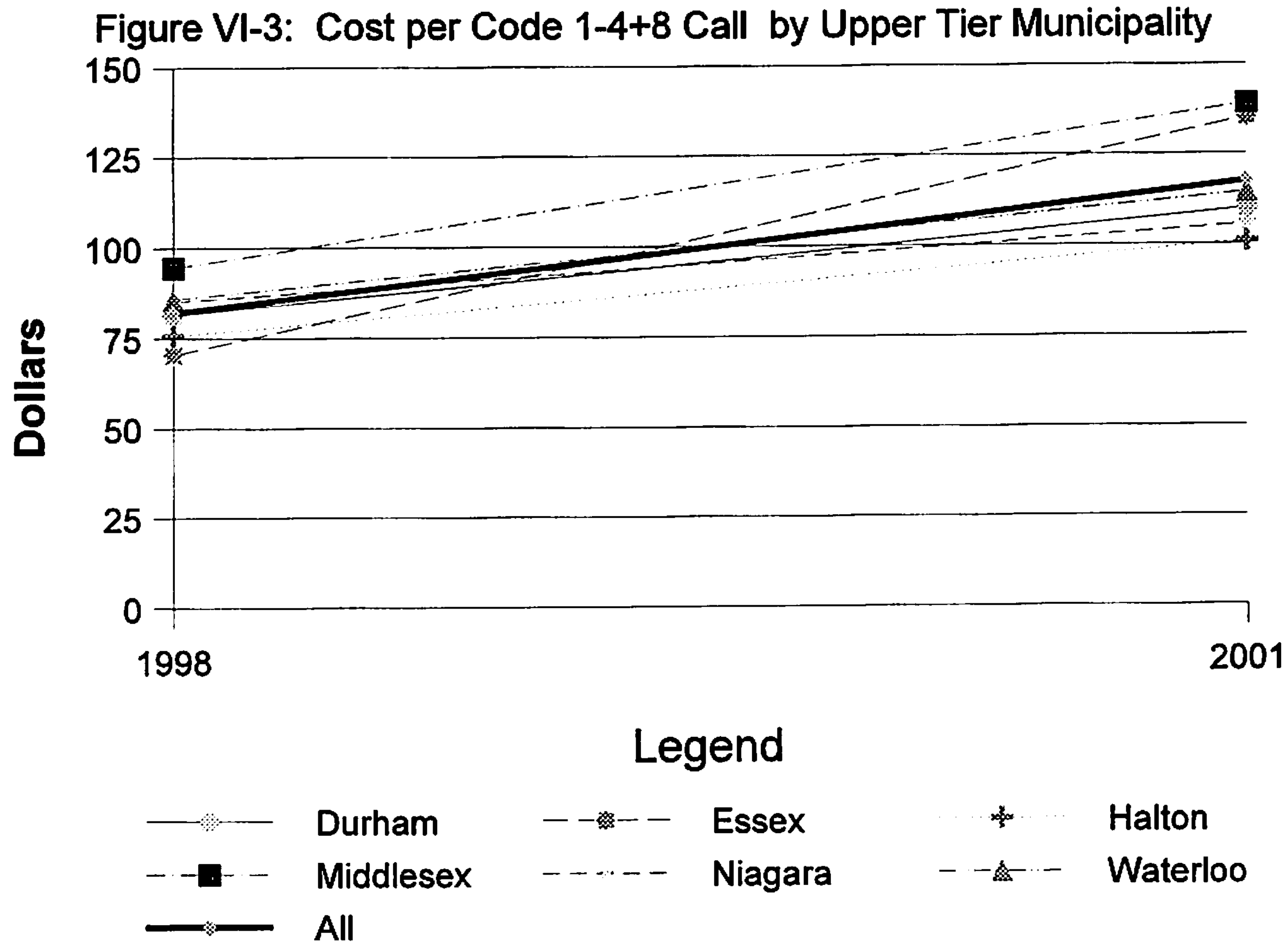
Figure VI-3: Cost per Code 1-4+8 Call by Upper Tier Municipality
150
125
100
75
50
25
0
Dollars
1998
2001
Legend
Durham
Essex
Halton
Middlesex
Niagara
Waterloo
All

APPENDIX VII - Classified Service by Salary Intervals
(As adopted from Civil Service Commission Annual Report 1999-2000)

Salary	Total No. of Ministry Employees	% of Ministry Employees	EHS Salaries within range	EHS FTE (salaries /max wage)
Under $20,000	175	0.32%	$133,781	6.7
$20,000 - $29,999	739	1.34%	$560,208	18.7
$30,000 - $39,999	17,337	31.55%	$13,189,963	329.7
$40,000 - $49,999	13,477	24.53%	$10,255,144	205.1
$50,000 - $59,999	13,652	24.84%	$10,384,744	173.1
$60,000 - $69,999	5,503	10.01%	$4,184,835	59.8
$70,000 - $79,999	2,233	4.06%	$1,697,346	21.2
$80,000 - $89,999	676	1.23%	$514,220	5.7
$90,000 - $99,999	525	0.96%	$401,343	4.01
$100,000 +	635	1.16%	$484,343	4.4 (Uses max wage of $110K)
TOTAL	**54,952**	**100%**	**$41,806,540**	**828.4**

APPENDIX VIII - GLOSSARY OF TERMS AND ABBREVIATIONS

ALS	Advanced Life Support... The advanced level of care provided by Paramedics equipped with at a minimum, defibrillators and symptom relief medications
ACP	Advanced Care Paramedic... The highest level of training for land ambulance paramedics in Ontario. Requires graduation from a two-year Community College program in Paramedicine, plus post-graduate training to the Advanced Care level, and provincial certification as an Advanced Care Paramedic.
AMO	The Association of Municipalities of Ontario.
ARIS	Ambulance Response Information System... The combination of computer hardware and software used in Ontario for Computer Aided Dispatch and retrieval of dispatch record data.
AVL	Automated Vehicle Locating... A method of using satellites and cellular technology to automatically track ambulances, enabling dispatchers to select the nearest ambulance to a call.
Base Hospital	An area hospital assigned and funded by the Ministry of Health to provide advanced level training and quality assurance programs for local ambulance services. The Base Hospital Medical Director delegates medical acts to be performed by area paramedics under the auspices of his/her medical licence.
BLS	Basic Life Support... The basic level of first aid and CPR provided by ambulance officers or firefighters not trained to the PCP or ACP level.
CACC	Central Ambulance Communications Centre... One of nineteen land ambulance dispatch centres in the Province, operated by/for the Ministry of Health.
CAD	Computer Aided Dispatch technologies.
CMR	Canadian Medical Response... The now defunct division of Laidlaw, which attempted to consolidate Ontario's private ambulance services in a manner similar to their actions in the U.S.
CMSM	Consolidated Municipal Services Manager.

DDA	Designated Delivery Agent for ambulance services when an Upper Tier Municipality is not in place.
Dispatch Codes	The priority assigned to a call by a CACC communicator: Code-1 — Deferrable Non-Emergency Call (e.g., Return to a Nursing Home) Code-2 — Scheduled Non-Emergency Call (e.g., Medical Appointment scheduled for a set time) Code-3 — Urgent but Non-Life Threatening Emergency Call (e.g., Back Injury, Fractured Leg, Abdominal Pain) Code-4 — Emergency - Life Threatening Emergency Call (e.g., Shortness of Breath, Cardiac Arrest) Code-8 — Standby for Emergency Coverage when area ambulance is occupied on another call
Dispatch Interval	The amount of time the CACC takes to priorize a call and then accurately select and alert an ambulance crew. Standards require this interval to be less than 2 minutes, 90% of the time for Code-4 calls.
DSSAB	District Social Services Administration Board... Agencies responsible for delivery of ambulance services (and other human services) in most of Northern Ontario.
EHS	Emergency Health Services... The Branch of the Ministry of Health and Long-Term Care responsible for ambulance services in Ontario.
EMS	Emergency Medical Services... The general term for the network of trained health care practitioners, equipment and procedures that responds to medical emergencies in the community, and provides pre-hospital care and transportation services as required.
FTE	Full Time Equivalent... Hours of staffing equivalent to those worked by a full-time employee.
GTA	The Greater Toronto Area.

JE	Job Evaluation... The process used by many municipalities to compare wages paid with responsibilities required, across various job classifications.
LAISC	Land Ambulance Implementation Steering Committee... A joint committee of AMO and its representatives, the Ministry of Health, and senior political representatives, that advises the Minister of Health on ambulance transition issues.
LATT	Land Ambulance Transition Taskforce... The original broad stakeholder group assembled to review the revised ambulance legislation and develop appropriate transition principles and guidelines.
LSR	Local Services Realignment initiative of the Harris government.
OAOA	Ontario Ambulance Operators' Association... Now defunct. The primary group representing private ambulance operators in the province prior to devolution.
OHA	The Ontario Hospital Association.
OPALS	Ontario Pre-hospital Advanced Life Support study... A Ministry of Health funded pilot project investigating the benefits of adding Advanced Care Paramedics to selected urban municipalities across Ontario.
OPS	The Ontario Public Service.
OPSEU	The Ontario Public Service Employees Union which now represents CACC communicators, but once represented all OPS land and air ambulance paramedics.
PCP	Primary Care Paramedic... The minimum level of training for full-time employment in Ontario ambulance services. Requires successful completion of a two year community college program in Paramedicine, and provincial certification as an Advanced EMCA.
Symptom Relief	The program that allows Primary Care Paramedics to check blood sugar levels, administer ASA, Epinephrine, Glucose Gel, Glucogon, Nitroglycerine and Ventolin.

Time Stamps	The essential time elements of a given call, as recorded electronically in ARIS by the CACC communicator:

Time-0	Initial contact with the caller and first keystrokes by the CACC call taker.
Time-1	Confirmation of address and assignment of Call Priority which allows the call to be electronically transferred to a CACC dispatcher.
Time-2	Selected ambulance crew notified by base page, radio or telephone.
Time-3	Ambulance crew notifies CACC that it is enroute to the scene of the call.
Time-4	Ambulance arrives at the scene.
Time-5	Ambulance departs the scene for hospital.
Time-6	Ambulance arrives at the hospital.
Time-7	Ambulance clears the hospital for another assignment or to return to base.
Time-8	Ambulance returns to base.

UTM	An Upper Tier Municipality... Either a County, Region or selected District/City.
WDW	The "Who Does What" initiative

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