



# System Report Fiscal Years 2009-10 & 2010-11

November, 2011  
Honourable Maureen MacDonald  
Minister of Health and Wellness  
1690 Hollis St. Halifax, NS B3J 2R8

Dear Minister MacDonald:

It is with great pleasure that EHS presents its system report to you covering the 2009-10 and 2010-11 fiscal years. This report provides an overview of the EHS system and its accomplishments over the past two years.

First and foremost, I would like to take this opportunity to thank all of the people that make up the EHS system. Their efforts greatly contribute to the health and public safety of Nova Scotians and they are the reason that Nova Scotia is viewed as a world leader in out-of-hospital care.

During the past two years, there were many accomplishments in the EHS system. The first Paramedic Long Service Award ceremony was held in May 2010, awarding 115 paramedics for their service and we recently awarded 40 more paramedics at the 2011 ceremony. The MedicAlert Interchange Project was a world first, providing our paramedics with real time access to patients' MedicAlert information through their ePCR tablets. We have played an integral role in Better Care Sooner, beginning with province wide implementation of the RESTORE program that allows heart attack patients to receive faster treatment from our paramedics and a link to emergency departments. Through the introduction of the Extended Care Paramedic Initiative, seniors in some nursing homes have access to enhanced on-site health care from highly trained paramedics—avoiding unnecessary trips to the hospital. EHS LifeFlight has also received high commendation and full accreditation status while improving its service to Nova Scotians through dedicating an airplane exclusively for emergency health needs.

We continue to be a high performing system. EHS is looking forward to facing the challenges ahead and being part of providing better care to Nova Scotians.

Sincerely,  
Ian Bower  
Executive Director  
Emergency Health Services & Primary Health Care

## EHS Strategic Plan

### Vision:

Optimal and targeted systems of care for emergency and community-based health care services for the province of Nova Scotia

### Mission:

EHS will assure the best possible care to the communities we serve through collaboration, regulation, evaluation and research.

### Strategic Directions:

- EHS provides evidence-based, high-quality, safe patient care.
- EHS promotes excellence in the provision of innovative programs and services in an integrated and sustainable health system.
- EHS collaborates with provincial, national and international stakeholders to identify and implement novel solutions to health system challenges.

EHS has played a fundamental role in Better Care Sooner which is the plan to improve emergency care in Nova Scotia.

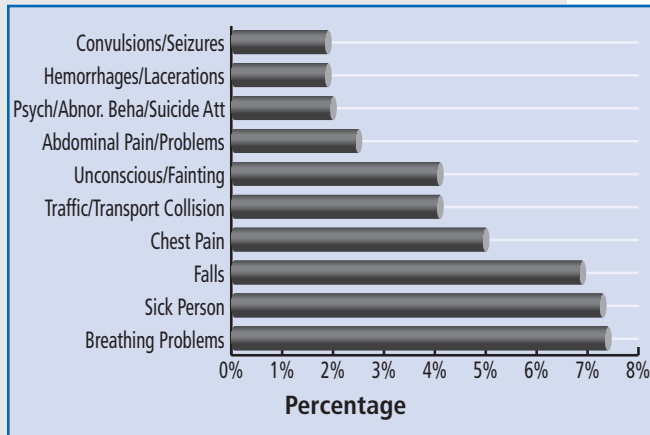
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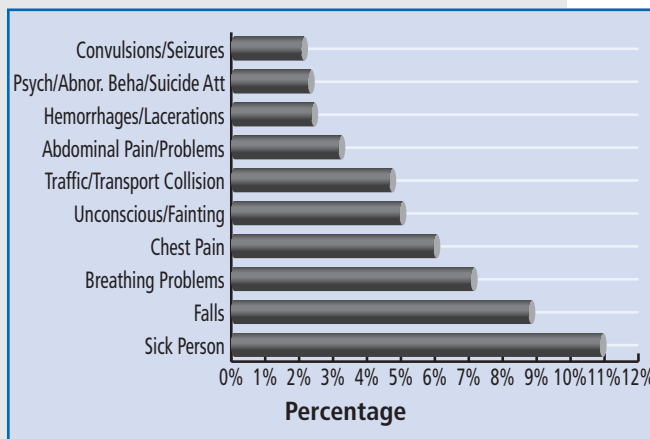
This plan is focused on five key elements:

- Access to doctors, nurses, and other health care professionals
- Streamlined patient-centred emergency care
- Care for seniors, people with mental illness and others with complex needs
- Appropriate use of paramedics and the 811 nurse line
- Funding and better health results for patients

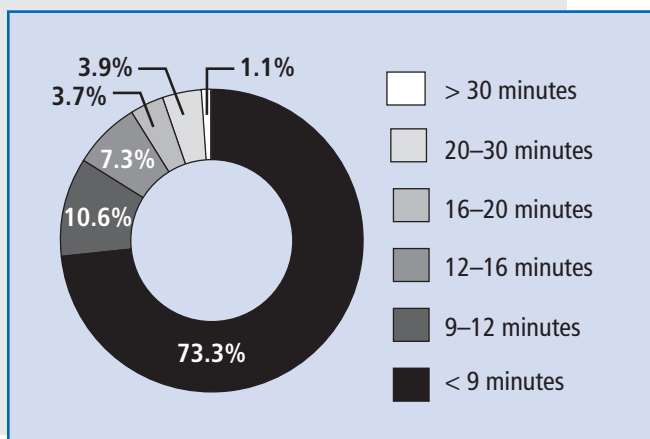
**Figure 1 Top Ten Chief Complaints 2009/10**



**2010/11**



**Figure 2 Response Times for Emergency Calls 2009/10**



EHS System Statistics		
	Fiscal 2009–10	Fiscal 2010–11
<b>EHS Ground Ambulance</b>		
Requests	123,050	126,437
Emergency/Urgent	70,110	73,209
Interfacility Transfer	52,940	53,228
Responses	119,505	122,460
Transports	101,869	99,538
Ambulances Dispatched	133,621	145,460
<b>EHS LifeFlight</b>		
Requests	970	1039
Responses	575	615

## Communications and Dispatch Services

In addition to the normal operations of a Medical Communications Centre for the province, this has been a very busy period for Communications and Dispatch Services at EHS.

The *Electronic Patient Care Report (ePCR)* Program underwent its first major upgrade, in 2009–10. Also, another huge initiative that was in the works this year was the MedicAlert Interchange Project. Now, if a patient is a MedicAlert client, EHS can collect the patient's health information enroute to the call.

Communications and Dispatch Services also continued its participation as a key stakeholder in the provincial Maritime Radio Communication Initiative (MRCI) project, being led by the Transportation and Infrastructure Renewal (TIR). The goal of this initiative is to prepare Nova Scotia, along with New Brunswick and PEI, for next generation voice communications. As preparation work, Communications & Dispatch Service has been active internally, over the past two years in replacing TMR radios, specifically in the ambulances, with newer, upgradeable models that will be capable of integrating with the next generation radio system.

## EHS Ground Ambulance and Disaster

There were a number of highlights in the ground ambulance system including:

### Operations

- The EHS Fleet travelled over 10,900,000 kilometers in 2009–10 and over 11,400,000 kilometers in 2010–11.
- In June 2010 the CDHA Patient Transfer Service was integrated into the EHS system.
- A major success during the period was the emergency medical coverage of the 2011 Canada Winter Games by EHS.

### Fleet

- 2009 saw the introduction of the Fleet Remount program which will significantly reduce capital costs. Under the program, ambulances are refurbished and remounted on new chassis before being rotated back into the system, extending their life. The program received a positive review in 2010.
- 2011 saw the introduction of a two stretcher multi-patient transfer unit ambulance as part of Better Care Sooner.
- EHS system vehicles as of March 31, 2011

Type 3 Ambulance	139	Medical Command	1
Type 3 Patient Transport Unit	8	Disaster Trailer	5
Expedition/Supervisor	10	Gator	3
Fleet Services	6		

### Facilities

- A new and modern fleet center was opened in Dartmouth. This new facility will ensure that all ambulances and system vehicles are stored in an indoor, secure facility.
- New Paramedic base stations were opened in:
  - Pictou
  - Oxford
  - Halifax (Agricola Street)
- Total number of facilities with emergency/generator power = 33
- Efforts are ongoing to increase energy efficiency at EHS facilities throughout the province as renovations are conducted and new facilities built.

• Emergency Preparedness

- The main focus in 2009–10 was the response to the H1N1 pandemic, and ensuring the safety of paramedics and the public. In 2010–11 there were a number of major events that EHS responded too, including major storms in the Annapolis Valley and Cape Breton, and the response to Meat Cove when it became inaccessible by road following storms that washed out bridges.

## EHS Provincial Programs

EHS Provincial Programs consists of the following five programs:

- EHS LifeFlight
- EHS Community Paramedicine
- EHS Medical First Response Program
- EHS Nova Scotia Trauma Program
- EHS Atlantic Health Training and Simulation Centre

## EHS LifeFlight

EHS LifeFlight continued its mission over the past two years by providing critical care to patients across the Maritimes through coordinated and professional health care delivered by dedicated and highly skilled medical and aviation crews. The entire EHS LifeFlight team is excited and committed to supporting this important link in Nova Scotia's response to the transport of critical care patients.

In November 2010, the Department of Health and Wellness approved the dedication of a fixed wing aircraft for EHS LifeFlight. Having two dedicated primary aircrafts increases LifeFlight's overall operational capacity, allowing greater flexibility to provide service with the most appropriate aircraft. Now the program is able to use a combination of resources to respond to mission requests; the rotor wing helicopter; fixed wing aircraft, and/or a ground ambulance.

In January 2010, LifeFlight received a full three year accreditation status from the Commission on Accreditation for Medical Transport (CAMTS). The accreditation process included a comprehensive document submission outlining many of the key processes within the system, as well as an intensive two-day site visit during which many key stakeholders were interviewed.

Feedback from the accrediting body was overwhelmingly positive. The intent of many accrediting bodies is to define a "gold standard" within an industry. Areas of excellence for EHS LifeFlight included:

- initial and ongoing education that included access to a state of the art simulation lab;
- involvement of the Medical Directors within the education program;
- safety management system and safety record; and
- the quality management system.

The external evaluation conducted by the Commission validates that the LifeFlight service does indeed provide the highest quality of care and that care is being delivered in a consistent manner.

## EHS Community Paramedicine

Community Paramedicine is a model of care whereby paramedics apply their training and skills in "non-traditional" community-based environments (outside the usual emergency response/transport model). The community paramedic may practice within an "expanded scope" (applying specialized skills/protocols), or "expanded role" (working in non-traditional roles using existing skills).

In 2001, EHS established the Long and Brier Community Paramedicine Program along a primary health care model of delivery. This community has access to quality primary health care services through the use of paramedics and a nurse practitioner who provide care in collaboration with an off-site physician.

Based on an "expanded scope of practice" the paramedics in Long and Brier provide pre-hospital care, plus they work in collaboration with the nurse practitioner, VON and home care agencies in a variety of patient-centered interventions.

In the Long and Brier Islands program, patients receive care through:

- health promotion
- early detection
- screening
- disease management

In February 2011, EHS launched the initiative, using an expanded scope, to deliver acute care to seniors in nursing homes as part of Better Care Sooner. Seniors in most CDHA nursing homes now have access to

Figure 2 Ground Ambulance Response Times for Emergency Calls 2010/11

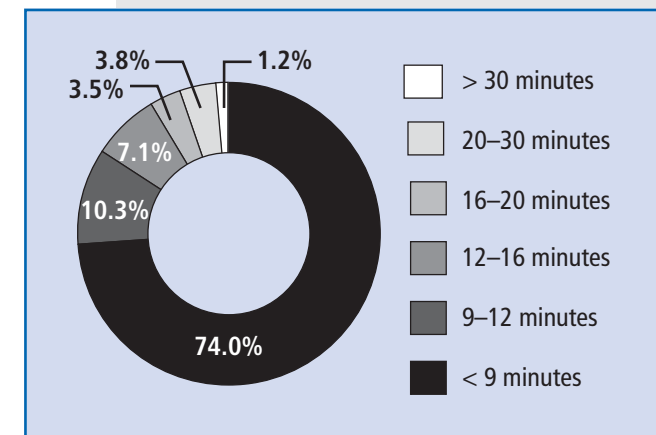
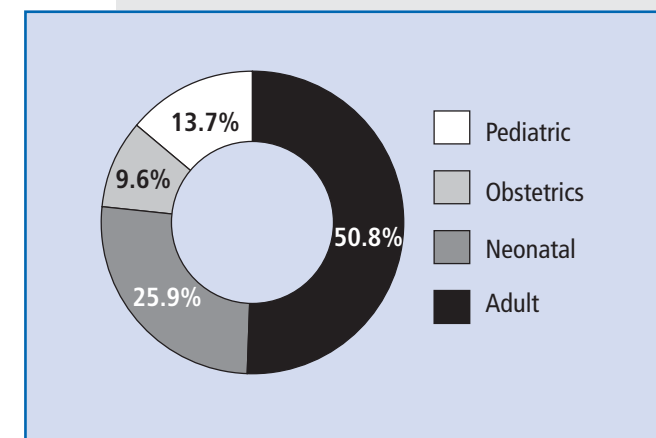
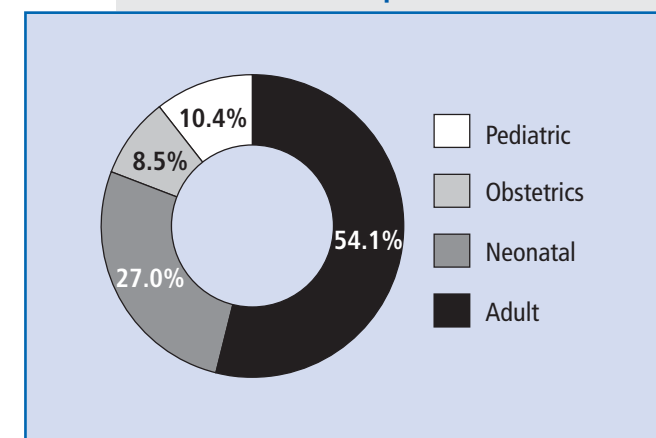


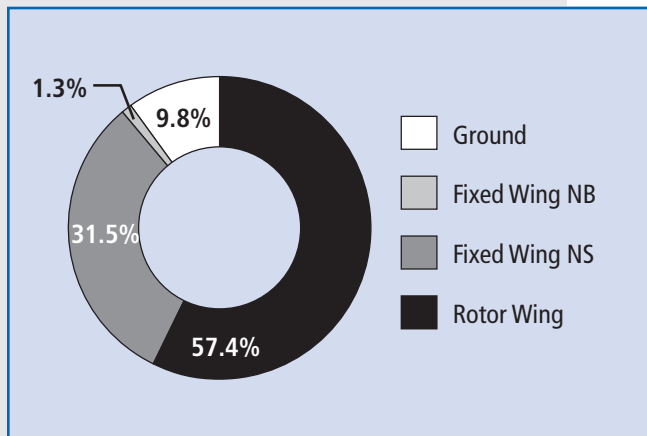
Figure 3 Critical Care Transports by Patient Category 575 transports 2009/10



615 transports 2010/11



**Figure 4 Critical Care Transports by Vehicle Type**  
615 transports 2010/11



enhanced on-site health care from highly trained paramedics, avoiding unnecessary trips to the hospital. The initiative offers seniors much of the same care they would receive in an emergency department, but is delivered by paramedics at their bedside. As part of the program, extended care paramedics assess and treat residents in collaboration with nursing home staff, family physicians, Capital Health and EHS resources.

In non-emergency situations, nursing-home residents receive a plan for follow-up care at home, or transport to the hospital at a later time, if required. If a patient requires emergency care, it will be provided immediately. The program is delivered in partnership with Capital Health initiatives that ensure access to primary care for residents in long term care facilities.

### EHS Atlantic Health Training and Simulation Centre

The Atlantic Health Training & Simulation Centre (AHTSC) has been in operation since January 1999. Through a partnership between EHS Nova Scotia, CDHA, the Departments of Anesthesia, Emergency Medicine, and the Division of Critical Care at Dalhousie University, AHTSC faculty are able to provide experiential learning and competency maintenance opportunities to a broad spectrum of health care practitioners using simulation-based clinical learning platforms.

Though the bulk of the program's operational support continues to flow from EHS, our expanding partnership with the Department of Anesthesia has allowed for greater latitude in the services that can be provided. This, combined with the in-kind support from CDHA, and fees for use of the centre and its resources, continues to support the efforts of the staff and faculty in providing high-quality learning and evaluative services for a variety of clinical groups.

The Centre is pleased to welcome Dr. Narendra Vakharia as the new Medical Director and bids a fond farewell to Dr. Adam Law who was with the Centre for more than 10 years. EHS continues to explore ways to best use this resource and ensure simulation training is readily available to various health care practitioners.

### EHS Nova Scotia Trauma Program

EHS continues to strive for excellence in trauma system design, trauma care, injury surveillance and research, trauma education, and networking in Nova Scotia; while maintaining a prominent regional and national profile through our various memberships, alliances, and partnerships. Our data is used by researchers, clinicians and planners for improving all aspects of the trauma system.

Trauma education through monthly multidisciplinary rounds is delivered through outreach programs. Advanced Trauma Life Support is managed by the Trauma Program.

The Nova Scotia Trauma Advisory Council has provincial representation in aspects of research, injury prevention and clinical care. Stakeholders in all groups bring forward information or issues that may be addressed or advocated by the Council.

The 2011 Trauma Registry Report on Injuries in NS is available at: <http://www.cdha.nshealth.ca/default.aspx?page=DocumentRender&doc.Id=9723>

### Trauma Association of Canada (TAC) 2010

Nova Scotia hosted the Trauma Association of Canada's annual scientific symposium on May 5-7 of 2010. The local organizing committee worked hard and delivered an excellent event. The conference provided opportunities to explore the diverse challenges in trauma care. This was the first time the meeting was held in Halifax and was the most successful and well attended conference in its history. This is a testament to our staff who helped organize the meeting and to our dedicated trauma system members.

## EHS Medical First Response Program (MFR)

Total MFR Agencies: 198

During these fiscal years the following MFR Agencies applied and received EHS MFR Sponsorship:

- Waycobah First Nation Fire Department
- Big Pond Fire Department
- Northfield Fire Department
- Kemptville Fire Department
- Pictou Landing First Nation Fire Department
- Bear River Fire Department
- Petite Riviere Volunteer Fire Department
- Plympton and Gilbert's Volunteer Fire Department

### Number of EHS registered Medical First Responders: 2,122

Through the sponsorship of EHS, these agencies received medical first response equipment, supplies and, for fully sponsored agencies, training reimbursement. EHS has also provided automated external defibrillators to fully sponsored agencies.

This past fiscal year has been busy with refresher training sessions for MFR agencies. There were 148 sessions attended by first responders throughout Nova Scotia with 327 competencies presented at these sessions. We have a dedicated group of paramedics that volunteer their time to facilitate these sessions. We acknowledge and truly appreciate our paramedics and all the first responders that work together to improve the skills of the MFRs, while also enhancing the relationships between medical first responders and paramedics.

Efforts continued this year to increase the percentage of EHS Registered MFR Agencies submitting patient care reports on a regular basis. Information sessions were held throughout the province to provide updates and refresher information to MFR agencies.

## EHS Medical Oversight

Provincial Medical Director/EHS: Dr. Andrew Travers
<b>N.S. Medical Directors</b> <ul style="list-style-type: none"><li>• Dr. Narendra Vakharia (Simulation Centre)</li><li>• Dr. David Petrie (Adult - LifeFlight)</li><li>• Dr. Chris Soder (Pediatric- LifeFlight)</li><li>• Dr. John Tallon (Trauma)</li><li>• Dr. Natalie Yanchar (Trauma IWK)</li><li>• Dr. Alix Carter (Research)</li></ul>

The Provincial Medical Director has the overall responsibility for managing and directing the clinical activities for all the EHS programs and ensuring the quality of medical care received by patients in emergency pre-hospital settings. Supporting the EHS system are a network of emergency department doctors who work with EHS across the province in a variety of roles, including providing formal medical oversight in key operational areas and working as online medical control providing 24/7 support for paramedics. For the Ground Ambulance Program there have been some tremendous advances in several domains over the 2009–2010 and 2010–2011 fiscal periods.

### Overview

Paramedics in Nova Scotia have embraced a number of new clinical initiatives over the past two years. There have been new advances in airway management with the prehospital AIME course and a refocusing on airway decision making in the out-of-hospital setting. Primary care paramedics are beginning to administer intravenous access to improve patient care. One of the major items occurring in the Ground Ambulance program is the shifting from prehospital protocols to prehospital guidelines. This reflects the maturation of the paramedic in the health care system, and we anticipate having new clinical practice guidelines out within the next fiscal.

Figure 5 Service Inquiries by Year

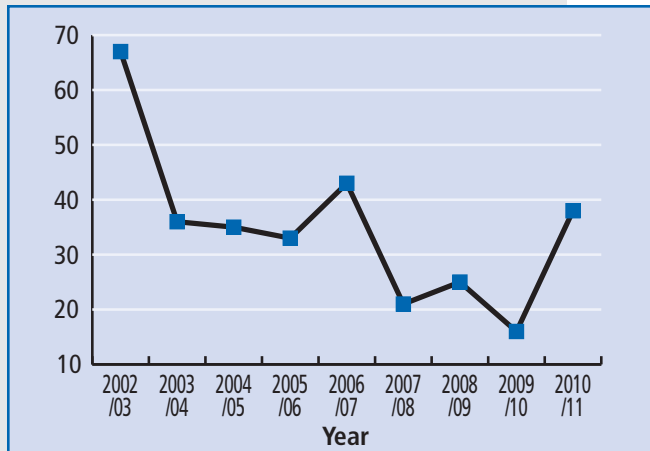
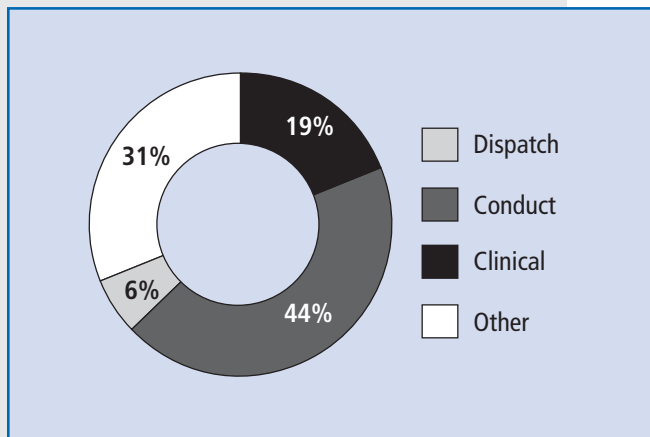
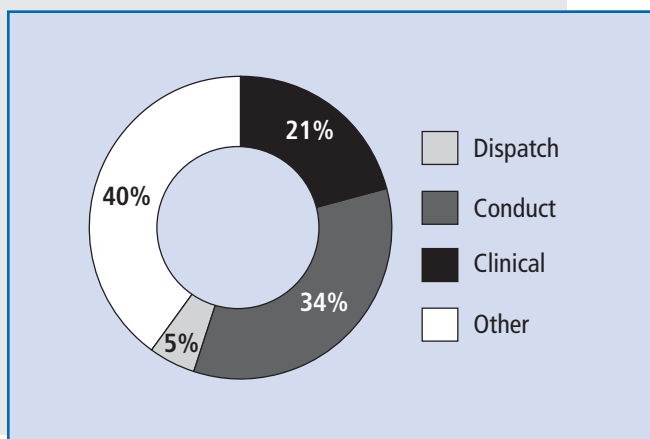


Figure 6 Service Inquiries by Nature 2009/10



2010/11



## Resuscitation

Since 2005 EHS has actively contributed and been co-author of both the 2010 ILCOR *International Consensus on Science with Treatment Recommendations* and the 2010 AHA *Guidelines for CPR and Emergency Cardiac Care*. These documents serve as the standard of care for resuscitation, were released on October 18, 2010, and have been implemented across the EHS programs.

## Stroke

Since 2009 EHS has contributed to the *Canadian Best Practice Recommendations for Stroke Care* (available at <http://www.strokebestpractices.ca/>). In 2010–11 EHS has implemented these guidelines across our ground ambulance system. EHS paramedics are trained to bring the right patient to the right stroke centre at the right time.

## ST Segment Elevation Myocardial Infarctions (STEMI) or ‘heart attacks’

Heart attack patients who call 911 will receive faster treatment through new training by paramedics. The provincial pre-hospital STEMI Reperfusion Strategy (RESTORE) has expanded province wide. As of April 2011 advanced care paramedics can now administer Tenecteplase (TNK), a clot-busting medication, if they are treating someone experiencing a heart attack. In addition, all paramedics in practice in CDHA have direct access to the PCI lab for patients with STEMI. Nova Scotia is the only province in Canada where this takes place province wide. This initiative is part of Better Care Sooner.

## Extended Care Paramedic Medical Oversight

The ECP program makes use of an extended care paramedic online medical oversight physician. The ECP MOPs currently are based out of the CDHA Halifax Infirmary and provide online support, in the form of patient dispositions. By the end of fiscal 2010–11, there were 113 patients enrolled into the ECP program: 83 (73%) no transport, 20 (18%) transport and return, and 10 (9%) transport and admit. This program has been a tremendous success to date.

## EHS Research

Major research projects in 2009–10 have included assessment of the impact of the airway changes (AIME program and KingLT), with practical and written exams and a look at the real-world intubation success. Aspects of this project have been presented at the Canadian Association of Emergency Physicians national meeting and the National Association of EMS Physicians annual meeting. Several of our paramedics are leading projects, including surveys on burnout, geriatric frailty, and violence in the workplace, and the development of a National EMS Research Agenda.

In 2010–11 the series of projects on the new airway training is wrapping up, and has found that knowledge at 12 months after the course remains better than pre-course, and that the KingLT device reduces the time with no CPR in a cardiac arrest. The third and fourth pieces of this project were presented at this year’s National Association of Emergency Physicians and Canadian Association of Emergency Physicians meetings, along with a project on mission acceptance in helicopter EMS. The Extended Care Paramedic Initiative has been awarded funding through NELS-ICE and is ongoing. The RESTORE projects are looking at a process map and decision making for prehospital clot-busting drug. Major projects right now also include leadership in the development of a National Research Agenda, and a multi-part study on the impact of offload delay on emergency medical systems. The growing research infrastructure and network of collaboration support this excellent work, and increasing numbers of publications and funded projects are a testament to this. It also promotes the growth of paramedic researchers, and recently completed projects by paramedics include a survey that identifies personality factors associated with burnout, perhaps allowing better coping strategies. To further the goal of capacity building, this year another objective is to provide more research education for paramedics. Ongoing work by paramedic researchers will deepen our understanding of the exposure to violence in the EMS workplace, and the needs of the frail geriatric population. Bring your ideas or questions to [EHSresearch@gov.ns.ca](mailto:EHSresearch@gov.ns.ca).

## EHS Service Inquiry Process

EHS uses a service inquiry process to establish trends in customer satisfaction and for quality purposes. There are a variety of reasons for making a service inquiry. These include: questions/comments regarding medical procedures and protocols, paramedic performance, and patient transfer questions or response times. Figure 5 shows the number of inquiries per year from 2002–03 to 2010–11. In 2009–10, EHS received a total of 16 formal inquiries. In 2010–11, EHS received a total of 36 formal inquiries. Figure 6 demonstrates the breakdown of inquiries by the nature. The service inquiry process is open to all residents of Nova Scotia. For more information on the process and the form to fill out, visit the EHS website at <http://www.gov.ns.ca/health/ehs/feedback.asp>.

## Financial

The Nova Scotia Department of Health and Wellness provides EHS with the resources to run emergency health services in the province. Figure 7 shows the actual expenditures for the last eleven fiscal years.

The Department of Health and Wellness budget for 2009–10 was \$3.42 billion, of which the EHS budget was 2.88% at \$98.5 million. The budget for 2010–11 was \$3.63 billion, of which the EHS budget was 2.91% at \$105.7 million.

Approximately 80% of the EHS costs are for paramedic, nurse, physician and other health professionals' salaries. The remaining 20% cover operational costs.

The cost of ambulance services is not and has never been an insured service. Each province determines the amount and the circumstances under which it will subsidize its services.

For Nova Scotia residents with a valid Nova Scotia Health Card, the government covers all costs associated with the care given by paramedics during an ambulance transport between approved facilities, i.e., between hospitals.

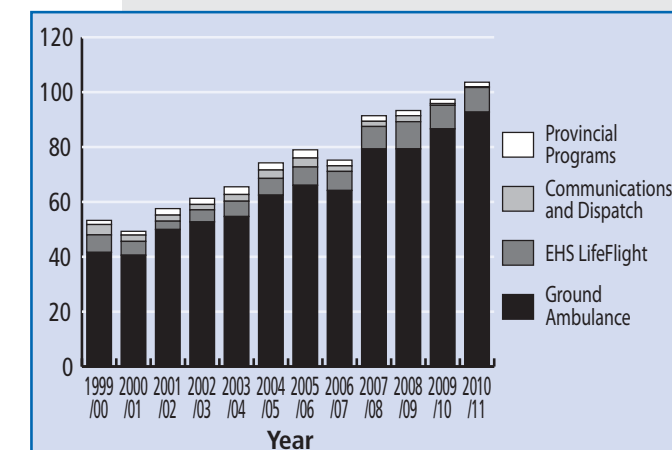
For medically essential transports, with a valid Nova Scotia Health Card, from place of residence to an approved health facility or scene to an approved health facility a service fee of \$134.52 is charged.

In those instances where an individual does not have a valid Nova Scotia Health Card; is eligible for third-party payment (insurance); or the ambulance trip is not medically essential, an unsubsidized rate is charged. The following fee schedule outlines the service categories and corresponding fees.

EHS Ground Ambulance Service Fees (As of April 1 <sup>st</sup> , 2009)		
Category	Medically Essential Transportation	Inter-facility Transportation
Most Nova Scotians with a valid health card	\$134.52	\$0.00
Non-Nova Scotians	\$672.57	\$0.00
Non-Canadians and New Canadians	\$1008.84	\$1008.84
People who are third party insured (This includes people covered by motor vehicle insurance, Worker's Compensation, or the federal government.)	\$672.57	\$672.57
Nova Scotians who are mobility challenged (non-emergency)	\$168.14	N/A

*Source: Ambulance Fee Regulations*

Figure 7 Financial Summary by Program (Millions of Dollars) 2010/11



## Contacts at EHS

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