

Message from Executive Director

Dear Minister Wilson,

It is with great pleasure that EHS presents its system report to you covering the 2011–2012 fiscal year. This report provides an overview of the EHS system and its accomplishments from last year.

First and foremost, I would like to take this opportunity to thank all the people that make up the EHS system. The efforts of our paramedics, nurses, physicians, other health professionals and first responders greatly contributes to the health and safety of Nova Scotians and they are the reason that the province is viewed as a world leader in out-of-hospital care. We would also like to thank our system partners Emergency Medical Care Inc, Dalhousie Division of Emergency Medical Services, the District Health Authorities and IWK, Provincial Airlines Limited, Canadian Helicopters Limited, and Tri-Star Industries.

During the past year, the EHS system had many accomplishments:

- The second annual Paramedic Long Service Award ceremony was held in May 2011 and 40 paramedics were honoured for their service.
- On July 27, 2011, EHS worked with Cumberland Health Authority to open the first Collaborative Emergency Centre (CEC) in Parrsboro at the South Cumberland Hospital. The CEC provides expanded access to primary health care and ensures emergency care is available 24 hours a day, seven days a week. Overnight, a registered nurse and a paramedic work under the direction of an EHS medical oversight physician to look after patients' needs. This offers a chance to integrate the competencies that paramedics and registered nurses already have, for the benefit of the patient. A second CEC opened at All Saints Hospital in Springhill on March 24, 2012.
- The Extended Care Paramedic Program for seniors in nursing homes, which provides access to enhanced on-site health care from highly trained paramedics and avoids unnecessary trips to the emergency department, won a gold Public Sector Leadership Award in the Health Care category from the Institute of Public Administration of Canada and Deloitte, on February 13, 2012.
- This year, the EHS team welcomed a new Director of Provincial Programs, Chris Nickerson.

These are just a few highlights from 2011–2012.

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

Sincerely,



Ian Bower
Executive Director
Emergency Health Services



EHS Strategic Plan

The Emergency Health Services (EHS) system is a series of partnerships between government and service providers that is a critical component of the Nova Scotia health and wellness system. Its key mandate is to ensure the delivery of collaborative health care to communities including medical communications, medical first response, ground and air ambulance and other innovative programs. EHS is at the forefront of providing innovative health care to Nova Scotians.

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, operations, 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 local, provincial, national and international stakeholders to identify and implement novel solutions to health system priorities.

Better Care Sooner

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

This plan is focused on five key elements:

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

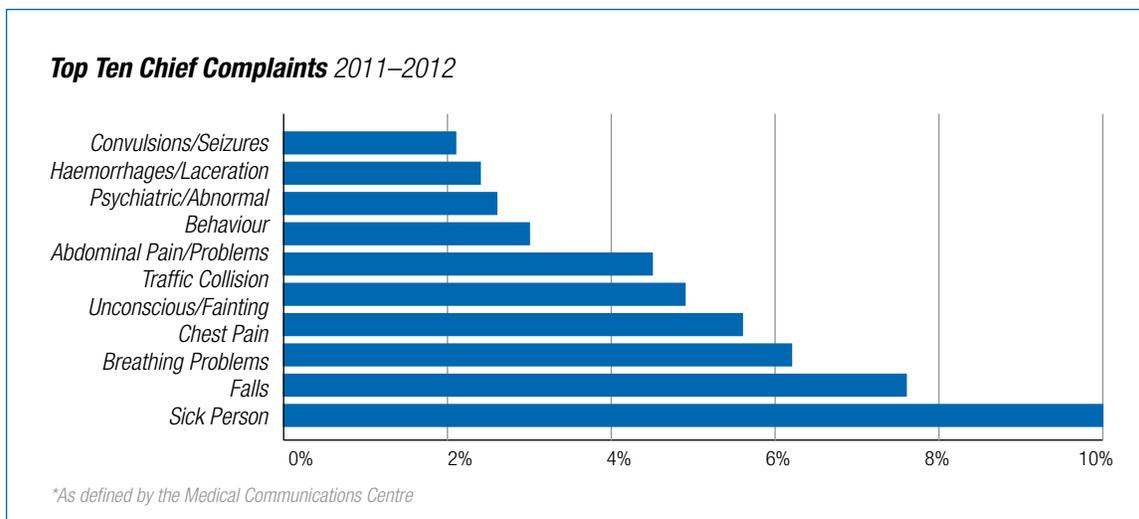
EHS Ground Ambulance	
Requests	137,374
Emergency/Urgent	74,101
Inter-facility	63,273
Responses	122,531
Ambulances Dispatched	129,084
Transports	114,765

EHS LifeFlight (Critical Care Transport)	
Requests	996
Missions	589

Communications & 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 supporting CECs and the Extended Care Paramedic Program.

Our Communications & Dispatch Service has been active internally over the past year in replacing Trunk Mobile Radios. A survey of hospital based radio systems has also been conducted in preparation for the replacement and upgrading of those radios. Renovations to the Medical Communication Centre were completed to allow for more efficient services and in preparation for future enhancements to services.





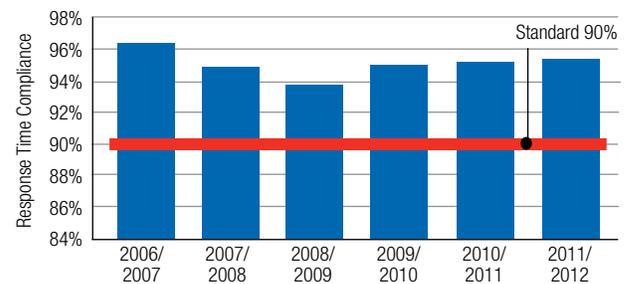
EHS Ground Ambulance and Disaster

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

Operations

- Over 12,500,000 kilometers were traveled by the EHS fleet with no major incidents.
- Consolidation of Fleet Services through the amalgamation of the Northern and Central Fleet Centres.
- The ground ambulance system has continued to meet the response time standards for emergency calls of 90 per cent throughout Nova Scotia. The performance in 2011–2012 was 95.36 per cent.
- EHS continues to collaborate with district health authorities to work through health care system challenges to provide optimum response times by identifying opportunities in the system to use methods and technology to maximize the efficient use of ambulances.

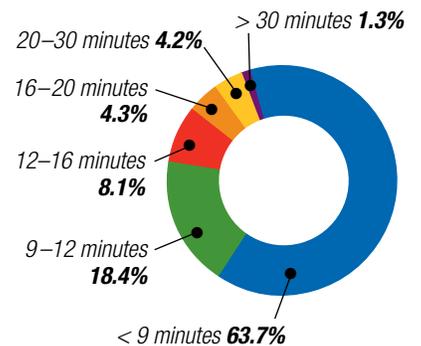
Ground Ambulance Fractile Response Time Compliance
(All Calls: Emergency, Urgent, Transfers)



Fleet

- Ongoing background work and preparations were conducted toward the goal of replacing the current ambulance fleet starting in 2014.
- The Multi-patient Transfer Unit (MPTU) saw substantial use, conducting 1083 transports; of these 196 (392 patients) were double transports.
- EHS system vehicles as of March 31, 2012:
 - Type 3 ambulance – 139
 - Type 3 Patient Transport Unit – 11 (PTU – 7, MPTU – 3, Bariatric – 1)
 - Expedition/Supervisor – 11 (10 Supervisor, 1 ECP)
 - Fleet Services – 4
 - Medical Command – 1
 - Disaster Trailer – 5
 - Gator – 3

Response Times for Emergency Calls 2011–2012



■ **Facilities**

- Efforts are ongoing to increase energy efficiency at EHS facilities throughout the province as renovations are done and new facilities are built in partnership with Nova Scotia Power and Efficiency Nova Scotia.
 - Number of ambulance bases energy retrofits: 33 (2011–2012)

- New Bases:
 - QEII (Transfer Bays)
 - Cheticamp
 - Northern Region Administration Office – Truro

■ **Emergency Preparedness and Disaster Response**

- EHS participated in numerous emergency events and exercises last year:
 - SAX – South Shore
 - NEREX
 - Shoreham Village A Wing Evacuation Exercise
 - Joint Dam Failure Exercise
 - Airport Tabletop
 - CJIRU – CBRNE
 - NEREX
 - South West Health Hurricane Exercise
 - The WFX-FIT Test for DNR
 - Aberdeen Bomb Threat

- A key activity during 2011–2012 was planning for the establishment of a multi-disciplinary team of paramedics, nurses, physicians and communications officers to provide operational support for health emergencies and public safety operations that exceed the ability for EHS and the greater Department of Health and Wellness's normal operational capacity.

- Other activities include:
 - Participating in committees and meets with allied agencies to ensure a properly functioning and integrated all-hazards approach.
 - Providing appropriately trained staff and other resources to support Emergency Operation Centres (EOCs), scene response and scene management.
 - Participating in programs and meetings regarding vaccine programs, pandemic planning, and DHA planning.
 - Participating in the planning, preparation and response to large-scale events, including but not limited to pandemics, and/or declared disasters.



EHS Provincial Programs

EHS Provincial Programs consists of:

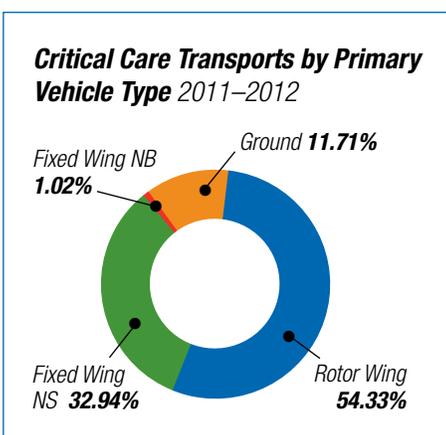
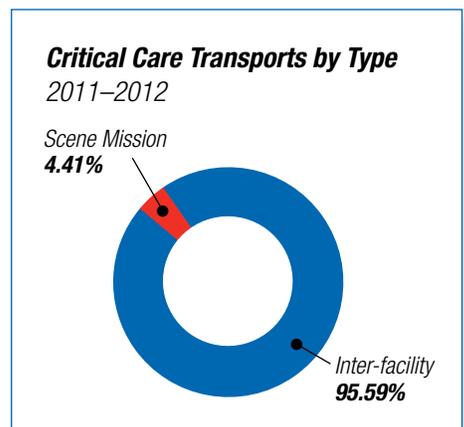
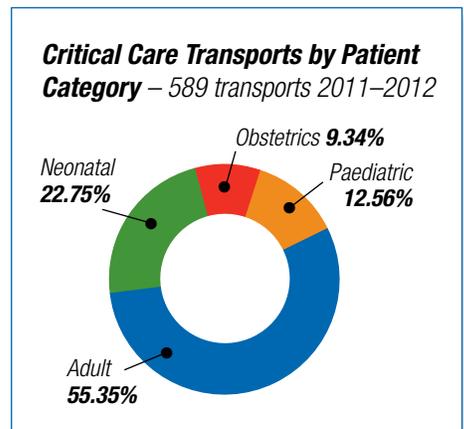
- EHS LifeFlight
- EHS Community Paramedicine
- EHS Medical First Response Program
- EHS Nova Scotia Trauma Program

EHS LifeFlight

Highlights of this year include integrating a dedicated fixed wing aircraft into LifeFlight operations, implementing a new Air Medical Transport Database, transitions in medical leadership and preparing for accreditation.

Integrating a dedicated fixed wing into EHS LifeFlight operations included the development of a vehicle use process where guidelines were developed to determine the best vehicle for the mission response based on a patient's condition, the distance required for the transport and time of day.

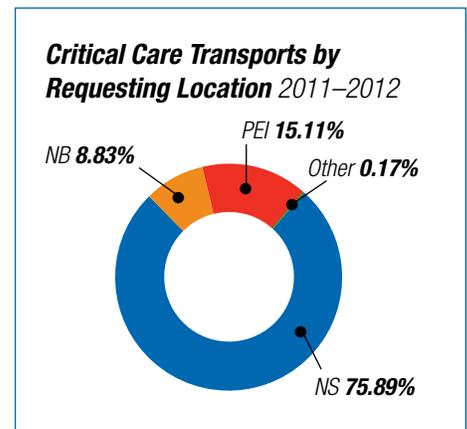
This dedicated fixed wing truly complements EHS service by allowing the program better opportunities to accept requests for use. This marks the first year that the LifeFlight program has had the full benefit of having three options for responding to missions: the helicopter, the fixed wing and the ground system.



In January 2011, the LifeFlight program team implemented a new Air Medical Transport Database that captures information on every mission consult, request and transport. The goal is to have a repository of information that can be drawn upon for statistical reporting and quality management, in addition to contract reporting and meeting accreditation requirements. Although significant work has been invested in implementing this program, there is still much more to be done over the next year to complete report development and fine tune the auditing process to ensure the data captured is as accurate as possible. This year the LifeFlight program also trialed the use of tablet computers to access evidence-based protocols while providing care.

The LifeFlight program team also experienced changes in medical leadership in both Adult and Obstetrics, and Paediatric and Neonatal components of the program this year. Dr. David Petrie, the program's long-standing Adult Medical Director, transitioned to another leadership opportunity in September 2011, while the IWK Medical Director, Dr. Chris Soder, stepped down in February 2012. To this end, EHS LifeFlight welcomed a new interim Medical Director, Dr. George Kovacs. Dr. Kovacs brings with him a wealth of knowledge and experience, including a strong background in airway research.

Work has also continued this past year in preparing the EHS LifeFlight program for upcoming accreditation by the Commission on Accreditation for Medical Transport. Documentation for re-accreditation will be submitted in the fall of 2012 with a site visit from the accrediting body surveyors before winter. The purpose of continued accreditation status is to validate to the citizens of Nova Scotia that they will continue to receive the highest quality of care from the EHS LifeFlight program.



EHS Innovative Paramedic Programs

The paramedics participating in Innovative Paramedic Programs practice with an expanded scope (applying specialized skills/protocols), expanded role (working in non-traditional roles using existing skills) or a combination of both.

Community Paramedicine – Long & Brier Islands

Community Paramedicine is a model of care where paramedics apply their training and skills in non-traditional community-based environments.

In 2001, EHS established the Long and Brier Community Paramedicine Program. 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 role and scope of practice, the paramedics on Long and Brier Islands 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

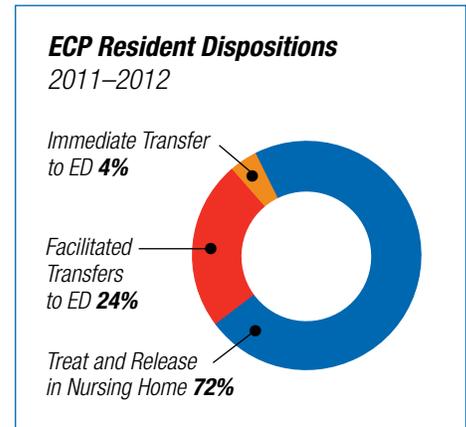


Extended Care Paramedic Program

The ongoing Extended Care Paramedic Program has paramedics using an expanded scope to deliver acute care to seniors in nursing homes as part of Better Care Sooner. Seniors in most Capital District nursing homes now have access to enhanced on-site health care from highly trained paramedics to avoid 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, and Capital Health.

The ECP program started on February 2, 2011, and is available from 0900–2100h, seven days a week in 17 nursing homes. In 2011–2012, over 761 patients were seen: 72 per cent (554/761) were treated and released, keeping the patient safely at home; 24 per cent had facilitated emergency department transfers, reducing the wait time for patients in the ED; and 4 per cent (28/761) required emergency transport to hospital.

By treating patients directly in their nursing home, this reduced the number of patients being transported to local hospitals. This has benefits in terms of less emergency department congestion and less resource consumption at a hospital level.



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; while maintaining a prominent regional and national profile through our various memberships, alliances, and partnerships. EHS 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.

In 2011–2012 EHS said farewell to Dr. John Tallon who was Medical Director for 10 years. Dr. Tallon had firmly established the program before moving on to his next challenge. The program welcomed Dr. Guy Brisseau as interim Medical Director. Dr. Brisseau has been part of the Nova Scotia Trauma Program as a Trauma Team Leader and as a respected surgeon, and brings opportunities for new development. The 2012 Trauma Registry Report on Injuries is available at: www.cdha.nshealth.ca/trauma-program/trauma-registry

EHS Medical First Response Program

Total Medical Flight Responder (MFR) Agencies in 2011–2012: 205

During this fiscal year the following MFR Agencies applied and received EHS MFR Sponsorship:

- Annapolis Fire Department
- Caribou and District Fire Department
- Mahone Bay Fire Department
- New Victoria Fire Department
- Newcombville Fire Department
- Shelburne Fire Department
- Tatamagouche Fire Department

Number of EHS registered Medical First Responders: 2,430

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

This past fiscal year has been busy with refresher training sessions for MFRs. There were 314 training sessions held throughout the province. We have a dedicated group of paramedics that volunteer their time to facilitate these sessions. We acknowledge and truly appreciate the collaboration and relationships between paramedics and first responders that support the improvement of our system.

Efforts continued this year to increase the percentage of EHS Registered MFR agencies submitting patient care reports on a regular basis. There were 14 information sessions conducted throughout the province to provide updates and refresher information. Annual report cards were issued to all MFR agencies showing their performance in the areas of documentation. A poster campaign commenced in March 2012 called ‘Paperwork Matters’ that encourages MFRs to complete patient care records and explains the importance of this medical information for patient treatment.

AEDs were updated to reflect the new 2010 CPR guidelines. This involved upgrading every AED issued to MFR agencies in the province with a software program. The units were inspected and defibrillator pads nearing expiry were replaced.

MFR agencies respond to different types of emergency and non-emergency calls based on their capacity and training, referred to as their level of service.

Three new service levels, Levels 5, 6 and 7, were implemented as a pilot project for six MFRs starting November 1, 2011. This may expand the MFR scope.



EHS Medical Oversight

Provincial Medical Director/EHS

Dr. Andrew Travers

NS Medical Directors

Dr. George Kovacs (LifeFlight Program)

Dr. Guy Brisseau (NS Trauma Program)

Dr. Natalie Yanchar (IWK – Trauma)

Dr. Alix Carter (Research Program)

The Provincial Medical Director has the overall responsibility for managing and directing the clinical activities of all EHS programs ensuring that quality medical care is received by patients in emergency pre-hospital settings. During 2011–2012, there has been a substantial expansion of EHS Clinical Programs. The success of these programs is due to continued innovation and collaboration between EHS, EHS Operations, as well as local DHAs, other DHW branches and other shared interest groups.

Special Patient Program (SPP)

The SPP is a service offered to patients who have complex medical conditions that are beyond the scope of the EHS evidence based pre-hospital protocols, and allows EHS to provide care tailored to their needs. These include patients with complex congenital heart disease, complex seizure disorders, left ventricular assist device patients, and patients on continuous infusions of life saving therapies. Over 75 patients are registered in the SPP across the province. For more information contact Tanya Fraser (tanya.fraser@gov.ns.ca or [902] 424-1729).

EHS Restore Program

Since April 2011, EHS has implemented the only Canadian provincewide pre-hospital fibrinolysis program. This was through successful collaboration with all DHAs, DHW branches and Cardiovascular Health Nova Scotia. Patients who call 911 with a heart attack can receive the same clot busting therapies provided in hospital on average an hour earlier reducing heart damage and saving more lives. This program is in addition to the highly successful CDHA Pre-hospital Percutaneous Coronary Intervention (PCI) Program where patients who are in cardiogenic shock or those who are located in the coverage area for the PCI lab are brought directly to the QEII to receive angioplasty care.

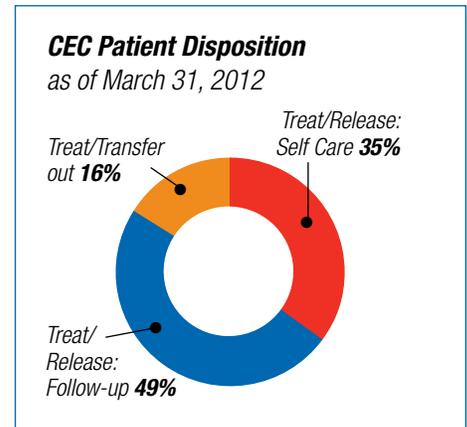
EHS Prehospital Stroke Program

Since April 2011, any patient who calls 911 and meets the established criteria, is brought directly to the local district acute stroke hospital (DASH) for emergent reperfusion therapy. Paramedic crews work with the DASH team to identify stroke patients, reduce the time to neuroimaging, optimize the chances for patients to receive reperfusion therapy and improve the patient's chances of recovery and survival.

Collaborative Emergency Centres

Since July 2011, EHS has worked with DHAs to implement the first Collaborative Emergency Centres. CECs are a solution proposed in Better Care Sooner to improve emergency department care to Nova Scotians. At the Parrsboro CEC, a nurse and a paramedic work together with an online EHS Medical Oversight Physician to provide care to patients between 2000h–0800h. This team allows the daytime primary health care staff to increase their availability for patients. By optimizing the work of the individual care providers using existing competencies, the onsite registered nurse, a paramedic and the online physician provide safe overnight patient care. A second CEC opened at All Saints Hospital in Springhill, Nova Scotia on March 24, 2012.

By the end of 2011–2012, with the Parrsboro CEC active for 248 days and the All Saints CEC for 5 days, nearly 200 patients were seen between 2000h–800h with 35 per cent of patients treated and released, 49 per cent treated with next day follow-up care, and 16 per cent of patients transferred to the regional hospital for further emergent care. The Parrsboro CEC saw approximately 0.75 patients per night overall, with no patients visiting the CEC on 48 per cent of the nights.



Canadian Prehospital Evidence Based Practice (PEP)

EHS continues to work with the Dalhousie Division of Emergency Medical Services to maintain the PEP Program. Using contemporary literature search strategies and critical evaluation techniques, PEP is leading a nationwide network of experts in pre-hospital care. This network provides EMS providers with the single largest repository of published EMS studies graded on their strengths of recommendation and includes sample of pre-hospital protocols from across the country. The PEP Program was presented at the National Association of EMS Physicians in 2012 at the annual scientific meeting. Information is available at: <http://emergency.medicine.dal.ca/ehsprotocols/protocols/index.cfm>

Provincial Public Access Defibrillation (PAD) Registry

EHS has partnered with the Heart & Stroke Foundation of Canada and the Heart and Stroke Foundation of Nova Scotia in the 'Restart a Heart, Restart a Life' (RAHAL) campaign. This collaborative effort is focused on deploying AEDs and CPR training to areas in the province that are at risk of having an out-of-hospital cardiac arrest. The focus of the program is to improve the chances of survival from cardiac arrest, by allowing bystander CPR and defibrillation to occur as EHS responds through the MFR and EHS Ground Ambulance programs. At present the RAHAL Program has awarded 26 AEDs to communities across the province with many of these being registered in the EHS PAD registry. In addition, AEDs deployed through other governmental initiatives are also registered in PAD. For more information, contact Tanya Fraser at tanya.fraser@gov.ns.ca or 424-1729.

More information: www.gov.ns.ca/health/ehs/pmd/AED.asp



EHS Research

This has been another great year for EHS Research and a year of continued growth. In January 2012, EHS researchers presented seven projects at the National Association of Emergency Medical Services (EMS) Physicians annual meeting. In addition to having an ever-growing numbers of abstracts accepted for presentation in the competition for this major conference, a number of papers were also accepted for publication.

The multi-year evaluation of the impact of teaching the airway course (AIME) to paramedics has produced its first publication. “The impact of an intense airway management course on paramedic knowledge and confidence before, after, at six and twelve months post training” was published in the *Emergency Medicine Journal*. Also published was, “Factors associated with the successful recognition of abnormal breathing and cardiac arrest by ambulance communications officers: A qualitative iterative survey” in *Pre-hospital Emergency Care*. Other projects at the presentation stage include a multi-phase development of an evidence-derived and consensus-based template for advanced directives accessible and useful in out of hospital situations.

Another major project in 2011–2012 was leading the development of a Canadian National EMS Research Agenda, with partnerships and collaborations from EMS leaders across Canada. Ongoing studies include a description of the characteristics of cardiac arrest in Nova Scotia, a look at the impact of the Extended Care Paramedic Program and an examination of the factors behind rates of utilization of a new technology that allows Medic Alert information to be downloaded onto a electronic charting device used by paramedics.

Projects led by EHS Research continue to ensure that one or more paramedics are included in every study team, often as research assistants who grow into principal investigators. This year also saw an increase in the number of research grants successfully completed. The productivity and connectivity of the EHS Research program continues to flourish.

EHS Research was proud to support the 4th annual EMS Research Day in March 2012, hosted at Dalhousie University Division of Emergency Medical Services. This event drew submissions of projects from across Canada, and presenters and audience members alike represented a wide range of services at this one-of-a-kind EMS event. The keynote speaker this year was Dr. Tim Kilner from Coventry University, in the UK. Dr. Kilner spoke on the education of EMS professionals, and the journey at Coventry in the development of a university-based paramedic education. Leadership from our branches of Community Paramedicine were also able to engage in some discussions with Dr. Kilner on the world-leading UK model of Community Paramedicine.

This year’s list of successes at EHS Research is a reflection of the EHS systems’ commitment to evidence based practice and innovation, but most importantly, it is a testament to the dedication of our people.

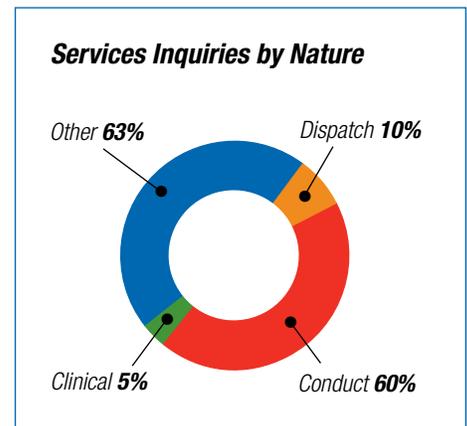
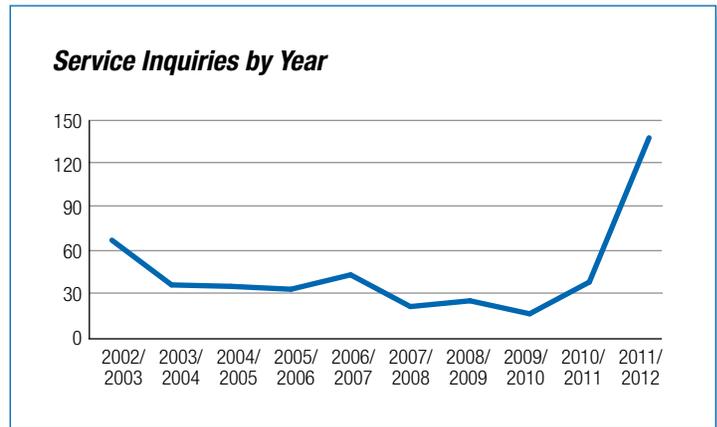
EHS Service Inquiry Process

EHS is a patient focused system that requires a method for stakeholders to easily inquire about operations. As a result, the EHS system has a service inquiry process that provides anyone who has come in contact with the system an opportunity to ask about its processes.

This process is designed to be client friendly and provide prompt and appropriate responses. All inquiries received by EHS are viewed as an opportunity to validate the system, enhance client satisfaction and drive system improvements and efficiencies. In this process, inquiries are logged and categorized to establish trends in issues so that EHS can use this information to improve the system.

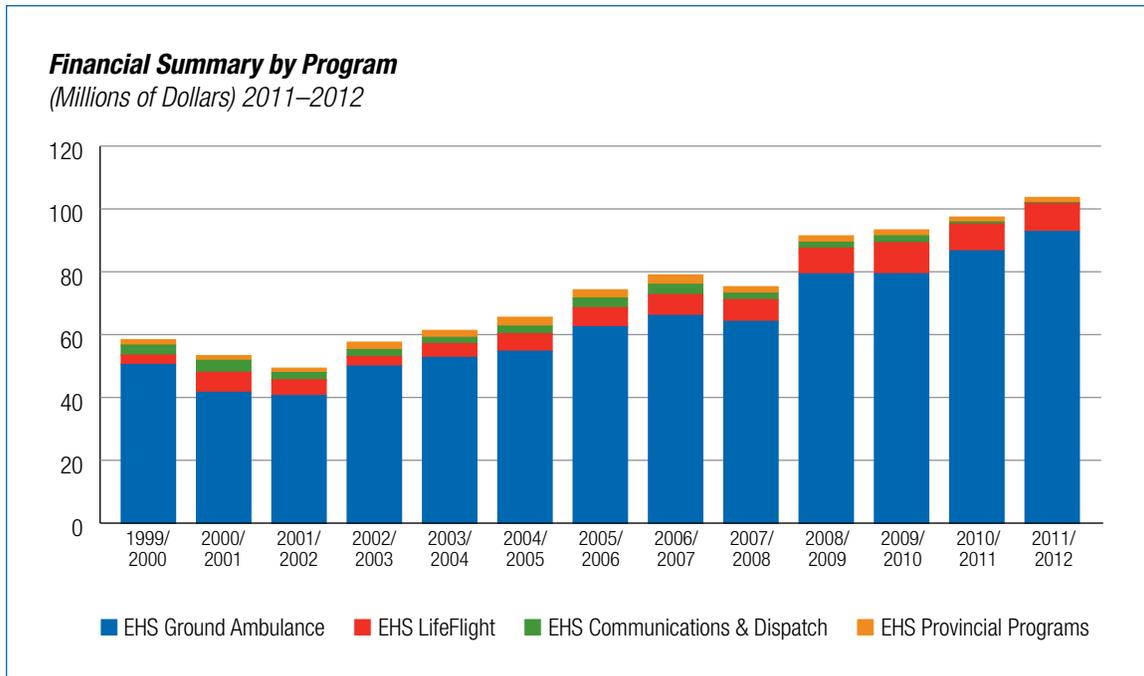
There are a variety of reasons for making a service inquiry. These include: questions/comments regarding medical procedures and protocols, paramedic performance, and patient transfer questions or response times. The chart **Service Inquiries by Year** shows the number of inquiries per year from 2002–2003 to 2011–2012.

In 2011–2012, EHS revised its service inquiry policy and improved its processes for recording and classifying service inquiries. These changes saw an increase in formal service inquiries, a number of which would have been dealt with informally in past years. The policy changes are intended to improve the reporting and responsiveness of the service inquiry process. During the 2011–2012 period, EHS received a total of 138 formal inquiries. The chart **Service Inquiries by Nature** demonstrates the breakdown of inquiries. The service inquiry process is open to all residents of Nova Scotia. For more information on the process or to fill out the form, visit the EHS website at www.gov.ns.ca/health/ehs/feedback.asp.



Financial

The Nova Scotia Department of Health & Wellness provides EHS with the resources to provide its services. The **Financial Summary by Program** shows the actual expenditures for the last thirteen fiscal years.



The Department of Health & Wellness budget for 2011–2012 was \$3.76 billion, of which the EHS budget was 2.88 per cent or \$108 million.

Approximately 80 per cent of the dollars spent are for paramedic, nurse, physician and other health professionals salaries. The remaining 20 per cent covers 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, that is, individuals 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 if 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 For the 2011–2012 reporting period.

	Medically Essential Transportation	Inter-facility Transportation
Most Nova Scotians with a valid health card	\$134.52	\$0
Residents of Nova Scotia Long Term Care Facilities	\$50	\$0
Non-Nova Scotians	\$672.57	\$0
Non-Canadians & New Canadians	\$1008.84	\$1008.84
People who are third party insured <i>(This includes people covered by motor vehicle insurance, Worker's Compensation, or the federal government.)</i>	\$672.57	\$672.57
Nova Scotians who are mobility challenged	\$100	N/A



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www.gov.ns.ca/health/ehs