

EHS Medical First Response Program 2009 Annual Report





Early in 2008, the MFR Strategic Advisory Committee recommended that we prepare a more detailed report on the EHS MFR Program. This is the second official EHS MFR Program report containing the highlights for 2009.

Late in 2004 a management team was formally assigned to provide services and support to the EHS MFR Program. Since then, we have diligently worked to maintain a successful program structured with documents to guide the program for years to come. Equipment and consumable supplies are constantly being evaluated to support the scope of practice for the EHS registered medical first responders of Nova Scotia. Several educational modules have been – and continue to be – developed to promote knowledge and skill development for medical first responders. As well, program policies are regularly reviewed to facilitate growth of the program.

This report is dedicated to the volunteer medical first responders who respond to calls at the request of the Nova Scotia EHS Medical Communications Centre; and to the many MFR facilitators and other paramedics who volunteer their time to provide and assist with MFR refresher training sessions held throughout the province. We wish to acknowledge and express our sincere appreciation to all volunteers who provide professional out-of-hospital medical assistance to patients.

We hope you enjoy reviewing this report. Our primary focus for 2010 will be encouraging MFR agencies to complete and submit their Patient Care Records (PCRs) to the EHS MFR Services office. In order to demonstrate growth in a clinical manner, we must stress the importance of proper documentation and the privacy of patient care information. We also look forward to sharing with you the 2010 CPR guidelines which will be formally released in the fall of 2010.

The support of our Provincial Medical Director and the MFR Strategic Advisory and Logistics committees has been instrumental in the progress of this important provincial program.

With our management team, we are proud to present to you the 2009 Annual Report on the EHS MFR Program of Nova Scotia.

Sincerely,

Original signed by

Derek LeBlanc
Director, Provincial Programs
Emergency Health Services

Original signed by

Kathleen McNally
Senior Manager
EHS MFR Services



Message from the Provincial Medical Director

It has been an exciting year with activities and lessons learned in the Medical First Response program in Nova Scotia. The lessons learned with the H1N1 pandemic and the importance of reducing risk to patient and rescuers was difficult for all, but did highlight the issue of infection prevention and control. Simple measures like 'respiratory hygiene' and 'hand washing' being the mainstay of preventing go well beyond protecting against H1N1, which is a sporadic viral infection. These principles go to protect against tuberculosis, methicillin resistant staphylococcal aureus (MRSA) and vancomycin resistant enterococcus (VRE).

Also during this year EHS has been working on the new cardiopulmonary resuscitation (CPR) guidelines, which are due for release on October 18, 2010. These guidelines are released every five years and we anticipate that there will be substantive changes and simplification to the guidelines. Since MFRs are frequently the first on scene, it is critical that the right things are done for the patient as we build the chain of survival by having paramedics continue the excellent care that you provide.

We are looking forward to continuing to work with you in the future in all aspects of the EHS MFR program.

With best regards,

Original signed by

Andrew H. Travers MD MSc (Epidemiology) FRCPC (Emergency Medicine)
Provincial Medical Director
Emergency Health Services

Vision

The Nova Scotia Emergency Health Services Medical First Response program is a provincial network of volunteer, community supported medical first response teams adequately resourced and competently staffed.

Mission

To enhance a community’s ability to provide safe, effective, reliable First Aid through participation in the provincial Medical First Response program.

In 2002/03, the Strategic Advisory Committee worked together to develop a strategic plan for the EHS MFR program. This plan allows for the provision of an effective MFR program that meets the needs of Nova Scotians. This plan identified five key strategic directions:

- An infrastructure that supports a province-wide volunteer MFR program
- A training plan that ensures competent MFR personnel
- A communications plan that fosters community support
- EHS sponsored MFR agencies that are strategically located
- Appropriate funding levels that ensure program sustainability

As of December 31, 2009, there are 192 EHS sponsored MFR agencies in Nova Scotia and 2,501 registered Medical First Responders. Through the sponsorship of EHS, these agencies receive medical first response equipment, supplies and, for fully sponsored agencies, training reimbursement. In many cases, EHS has also provided automated external defibrillators to fully sponsored agencies.

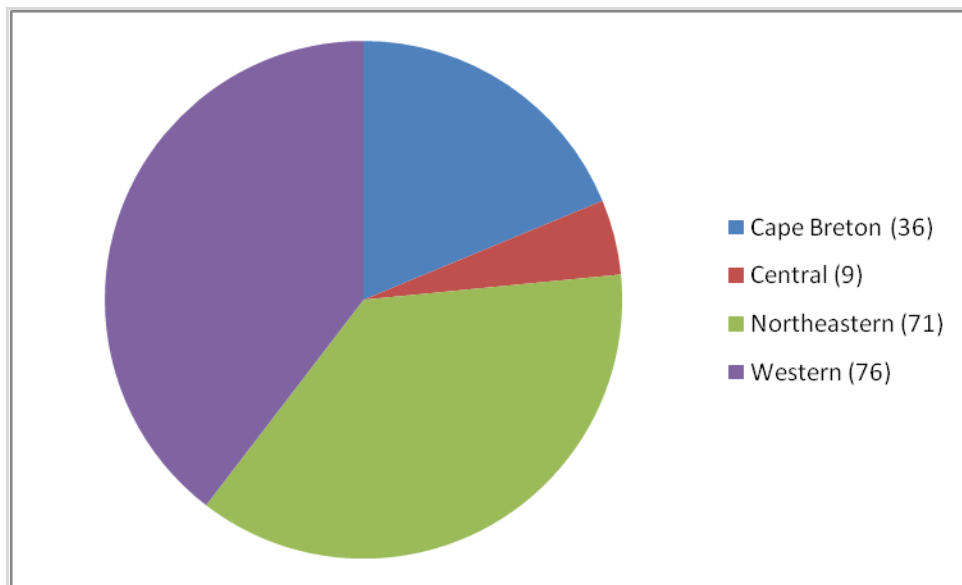


Fig. 1 EHS MFR Agencies by Region

Two fire departments became EHS sponsored MFR agencies in May 2009: Petite Riviere and Plympton & Gilbert’s Cove.

Personnel

EHS MFR Services has four core office staff working in the Redstone III Building on Brownlow Avenue in Dartmouth: Senior Manager, Kathleen McNally; Program Development Paramedic, Robert Boudreau (January-August)/Neil Mooy (August-December); Registrar, Barb Eld; and Administrative Assistant, Chantelle White-Evans.

In addition, EHS MFR Services is directly supported by Ambulance Operations Management and Derek LeBlanc, EHS Director of Provincial Programs, Dr. Andrew Travers, Provincial Medical Director, and their respective administrative assistants, Alishea Rose and Tanya Fraser.

EHS MFR Services is also guided by a Strategic Advisory Committee and a Logistics Committee, both with representation from stakeholders such as Fire Service Association of Nova Scotia, the Provincial Fire Marshal, Halifax Regional Fire and Emergency Services, Cape Breton Regional Municipality Fire Services, non-traditional MFR agencies, the Provincial Medical Director, and directors and managers of EHS and Ambulance Operations.

Six MFR Liaisons, EHS paramedics selected from each of the provincial regions (two in each Northeastern and Western regions), also assist the department on a part-time basis with various initiatives.

The success of the EHS MFR Program is also attributable to the commitment of the MFR Services approved EHS paramedics who graciously volunteer their time to coordinate and conduct refresher training sessions for medical first responders across the province.

Program Documents

Several EHS MFR program documents (policies) were revised.

Highlights:

Program Document 12005.00: MFR Accepting/Returning Equipment

- Replaced LIFEPAK 500 with HeartStart FRx

Program Document 12006.00: MFR Supplies

- Added HeartStart FRx defibrillator pads

Program Document 12008.00: MFR Registration

- Section 2.2 reflects that an individual must be associated with an EHS MFR Agency to be eligible to make application for an EHS MFR tag.

Program Document 1209.00: MFR Service Inquiry

- Changed fax number

Program Document 12012.00: Multiple Pre-Hospital Care Providers at Scene

- Clarified responsibility

EHS MFR Services provides support and services to medical first responders and MFR agencies throughout the province.

MMR Vaccination

In May 2007, in a protective response to the outbreak of the mumps virus in Nova Scotia, Dr. Robert Strang, Nova Scotia Health Promotion and Protection, announced an initiative for all health care providers in the province to receive the measles, mumps-rubella (MMR) vaccine.

Beginning July 2007, EHS MFR Services announced its support of the province's initiative and issued letters to EHS registered MFRs offering the opportunity to receive the vaccine at no cost to them.

The project was closed in June 2009, with 3,371 letters sent during the two-year period. Although the anticipated response was not received, the initiative did provide reasonable results considering the demographics (i.e. the average age of EHS registered medical responders is 41). Should any unpredicted pandemic occur in the future which requires similar action, the knowledge gained from this initiative provided the ground work and statistical database necessary to facilitate efficient implementation.

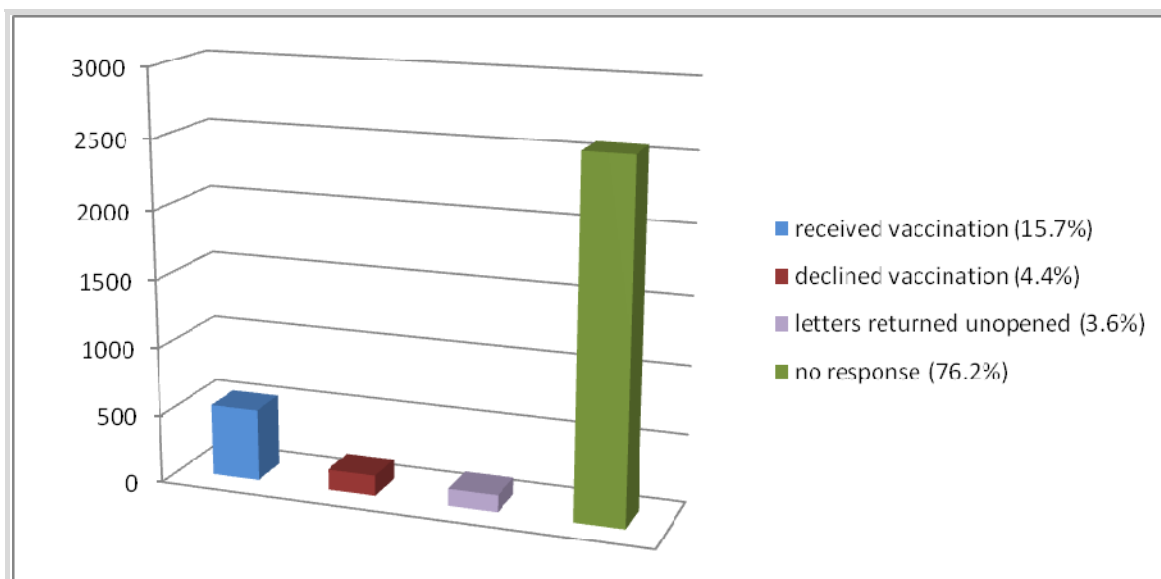


Fig. 2 MMR Vaccination Response

H1N1

During the summer and fall of 2009 EHS MFR Services received many inquiries with respect to the H1N1 (Human Swine Influenza) pandemic. The EHS MFR Services website was updated regularly as relevant information was released by the Nova Scotia Departments of Health and Health Promotion & Protection, and we will continue to work with provincial health officials to promote and educate medical first responders in Nova Scotia on their roles and responsibilities in such situations.

Defibrillator Project

In an effort to move the EHS MFR program forward, Emergency Health Services (EHS) announced, on May 2, 2008, the request to purchase 65 biphasic LIFEPAK 500 (“LP500”) automated external defibrillators (AEDs) by EHS MFR Services for distribution to sponsored agencies. An evaluation committee accepted and reviewed applications from interested agencies, and in many cases, these devices were provided as an upgrade to agencies utilizing older technology, e.g. LIFEPAK 300.

Late in 2008 EHS MFR Services was advised that Physio-Control/Medtronic would no longer be manufacturing the LP500; therefore selection of a new device was required to maintain continuity within all EHS sponsored MFR agencies across the province. Extensive research and evaluation was conducted on devices from the three leading manufacturers, and the Philips HeartStart FRx was selected as the best device to be currently utilized in the EHS MFR program.



Fig. 3 Philips HeartStart FRx defibrillator

With the assistance of several dedicated EHS MFR facilitators, devices and basic inservicing were delivered to agencies throughout the province during the months of March, April and May 2009.

While the HeartStart FRx defibrillator pads are not compatible with the LIFEPAK 12 used on EHS ambulances, each ambulance is equipped with a Philips Quik-Combo adapter which allows paramedics to connect the FRx pads to the LIFEPAK 12, thus enabling seamless continuation of patient care.



Fig. 4 Philips Quik-Combo adapter

Patient Care Reports (PCRs)

Significant effort was put into the development of a new, more user-friendly MFR patient care report, and numbered patient care report (PCR) books were issued to all EHS sponsored MFR agencies in June 2008. All MFRs are encouraged to review Program Document No. 12010.00 as a reminder to document patient care when assisting on medical calls.

In 2009, only 37% of all calls placed to EHS MFR agencies from the EHS Medical Communications Centre were documented on PCRs and submitted to EHS MFR Services.

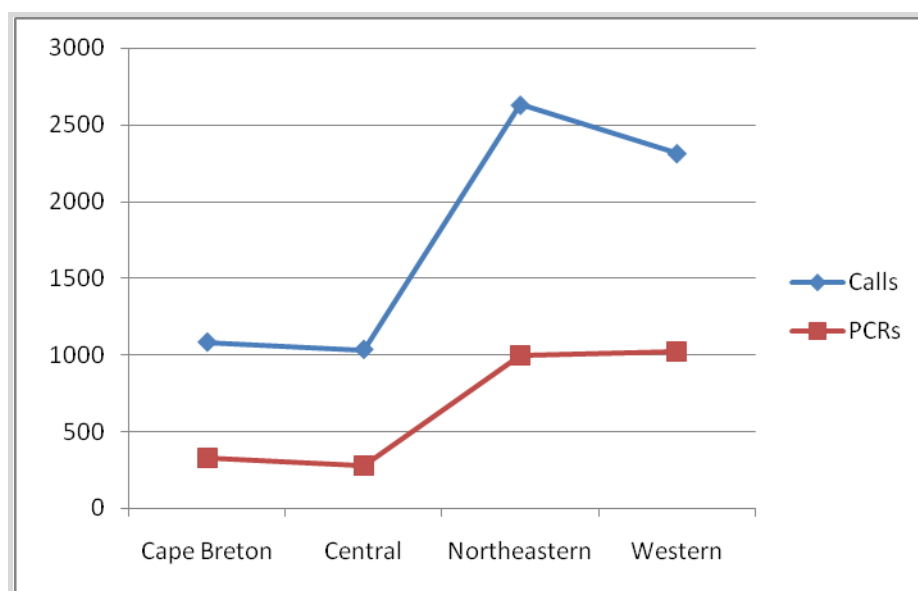


Fig. 5 Comparison of calls received vs. PCRs submitted

EHS MFR Services has prepared an educational presentation on documentation that is available to our MFR Facilitators for refresher training sessions.

Oxygen Exchange

In May 2006, EHS Ground Ambulance awarded the oxygen supply contract to one vendor. This was to supply aluminum oxygen cylinders to all EHS bases across Nova Scotia and help provide consistency and a standard product throughout. Keeping in line with this initiative, EHS MFR Services followed suit. The Central and Northern regions were consistent; however, change outs had to be made with the MFR agencies in the Western and Cape Breton regions.

Our key objective with this initiative was to make the exchange of aluminum oxygen cylinders easier for the MFR agencies. This can now be done at the nearest EHS ambulance base or perhaps on scene, if patient condition, time and supply allow. It is important for agencies to note that one empty oxygen cylinder can be exchanged for one full cylinder, to a maximum of two per visit, to ensure that the base supply is not depleted.

Website

The EHS MFR Services website, www.ehsmfr.ca, was redesigned in the fall of 2008 to become a more user-friendly “one stop shop” for MFR agencies, first responders and facilitators. The website is updated regularly and includes a training calendar indicating upcoming refresher sessions across the province, forms for registration and consumables orders, all Program Documents, staff contact information, news on current initiatives, and much more.

A new section was added to the EHS MFR Services website in the summer of 2009: MFR Education. This section offers information to supplement the hands-on refresher training sessions presented by EHS MFR Facilitators across the province, and currently includes basic information about the Philips FRx defibrillator; a bag valve mask (BVM) failure video which demonstrates the importance of proper assembly of the bag valve mask; and Online Triage, to provide an alternative method of attaining one of the competencies required for EHS MFR tag renewal.

The website also has a special section where EHS MFR Services’ Facilitators can download all necessary session planning tools and educational module presentations.

Consumables

EHS MFR Services provides consumable supplies and equipment (e.g. immobilization equipment, oxygen regulators and wrenches, defibrillator pads, etc.) to all registered MFR agencies. In 2009, 304 orders were filled for 132 of the EHS MFR agencies throughout the province.

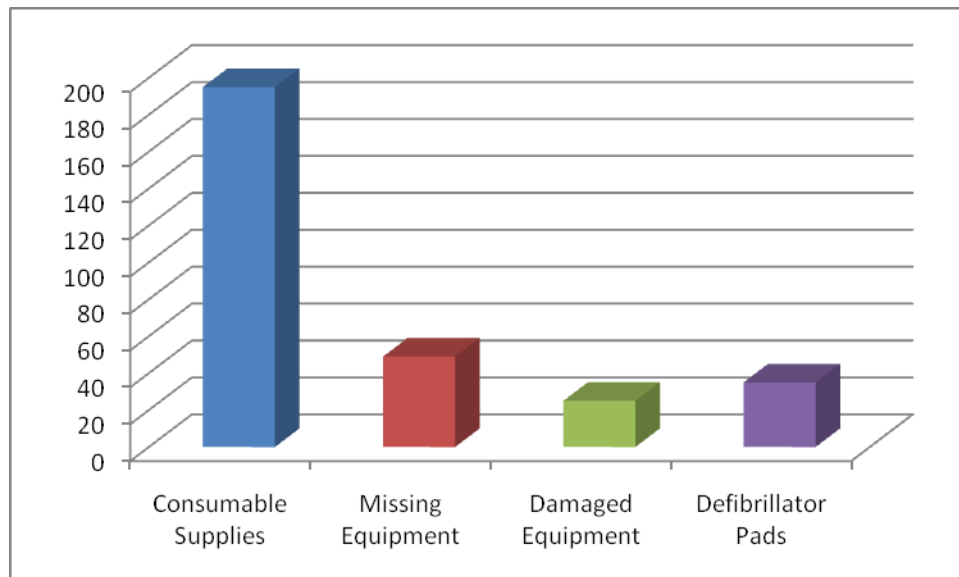


Fig. 6 Supplies & equipment orders filled for EHS MFR registered agencies

Refresher Training

The EHS Provincial Medical Director has approved six MFR Mandatory Essential Competencies, for which training modules have been developed. These competencies include Airway Management, Assessing Vital Signs, Automated External Defibrillation (AED), Cardiopulmonary Resuscitation (CPR), Primary Survey and Triage. Additional training modules have been developed for Bariatrics, Documentation, Emergency Childbirth, Safe Driving, Secondary Survey, and Splinting & Spinal Immobilization.

Training is delivered to agencies across the province by MFR Services approved EHS paramedics who volunteer their time as MFR Facilitators. During 2009, 156 training sessions, (comprising 361 competencies) were delivered by 47 active facilitators, with approximately 2,000 first responders in attendance.

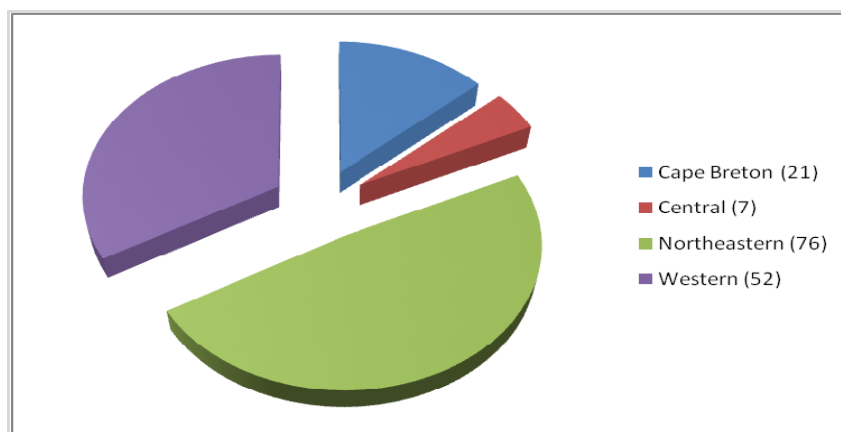


Fig. 7 EHS MFR sessions across the province

In addition to PowerPoint presentations for each training module, EHS MFR Services provides MFR Facilitators with all necessary equipment and training aids.

Many EHS paramedics who are not registered facilitators contribute to the delivery of the EHS MFR program. For example, in 2009, 271 paramedics volunteered their time to assist at EHS MFR refresher sessions.

We acknowledge and truly appreciate our paramedics and all the first responders that work together to improve skills and enhance the relationships between first responders and paramedics.



Fig. 8 MFRs practicing CPR at a refresher training session

EHS MFR Tag Renewal

In an effort to streamline the member database and avoid duplication of tag numbers, EHS MFR Services began issuing 6-digit MFR tags in August 2006.

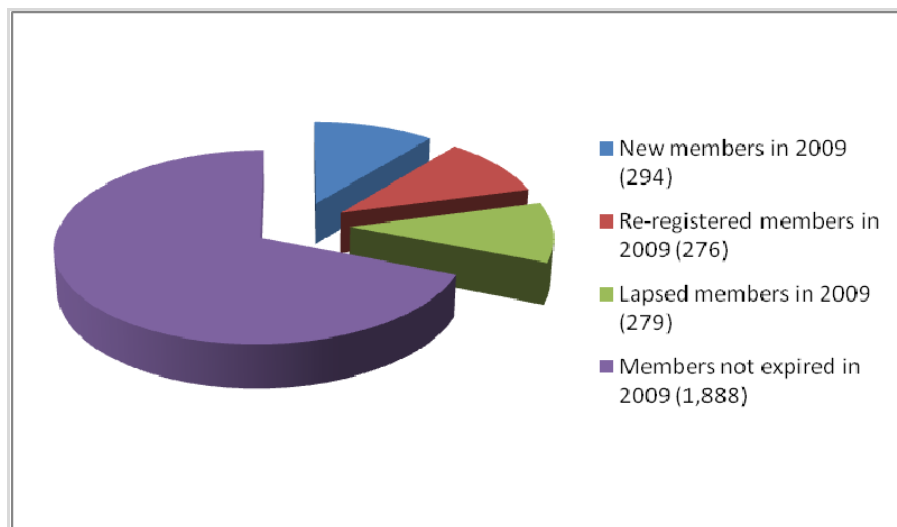


Fig. 9 EHS MFR tags issued in 2009

EHS MFR tags are issued to individuals who successfully complete MFR training by an EHS approved MFR training agency (St. John Ambulance and Canadian Red Cross) and submit an application for registration to the EHS MFR Services office. Applicants must be associated with a response agency listed in the Computer Aided Dispatch (CAD) system at the EHS Medical Communications Centre. (Please refer to Program Document No. 12008.00: MFR Registration.)

Tags are valid for a period of three years, during which time MFRs must complete refresher sessions sponsored by EHS MFR Services that cover the six mandatory essential competencies approved by the EHS Provincial Medical Director. If the six mandatory training sessions are not completed within the three-year period, individuals seeking re-registration must complete MFR training through St. John Ambulance or Canadian Red Cross.



Call Volume

The Advanced Medical Priority Dispatch system is designed to assess the location and number of patients and then to gather patient specific information to determine the correct unit type (Advanced Life Support/Basic Life Support) to assign and the manner in which the unit responds (Hot or Cold). Specific key questions based upon the patient condition are asked to determine the severity of the condition and assign a response determinant. MFR is initiated based upon patient condition and the level of response selected by the MFR agency of jurisdiction. For all calls except Echo level responses, MFR agencies are requested to respond upon reaching a determinant (after all questions are completed). For Echo level responses, MFR is notified as soon as the address is verified before key questions are completed.

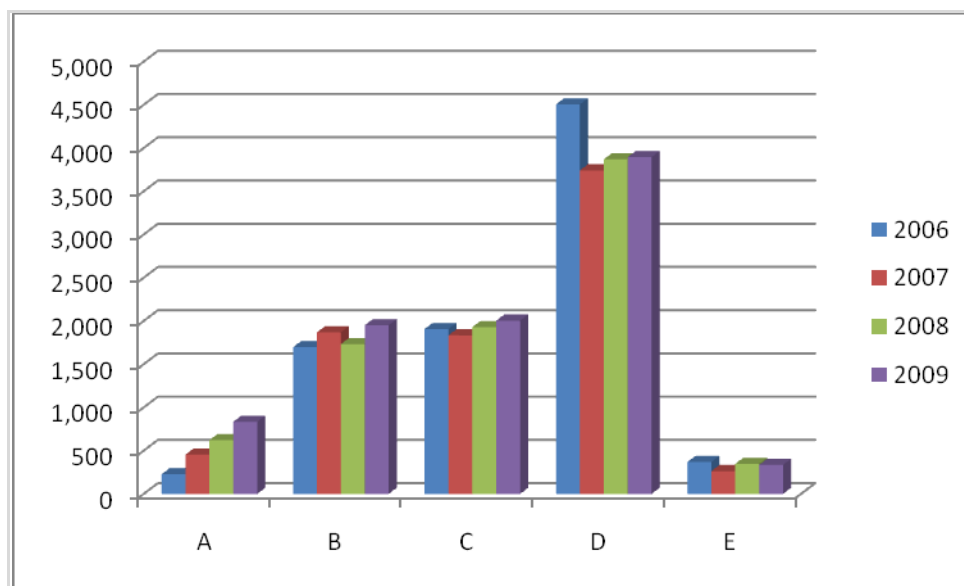


Fig. 10 Call volume comparison 2006-2009

Alpha Level Response

- Non-lights and siren (Cold) response
- Patient condition is not life or limb threatening
- May be handled by a Basic Life Support (BLS) unit
- There are no priority symptoms (chest pain, shortness of breath, altered level of consciousness, exsanguinating hemorrhage)
- Patient outcome will not be improved by the use of lights and siren
- Examples (unless priority symptoms are present): allergic reactions without difficulty breathing or swallowing; assault involving injury to a non-dangerous body area; burns <18% body surface area; diabetic awake and behaving normally; headache with normal breathing; minor bleeding; sick person; etc.

Bravo Level Response

- Lights and siren response
- May be handled by a Basic Life Support (BLS) unit
- Unknown conditions
- Condition may require timely intervention

- Examples: third party callers reporting a motor vehicle collision with unknown status of patient injury; assault involving a possibly dangerous body area; burns of an unknown status; convulsions or seizure of a patient with no known history of epilepsy; drowning of an unknown status or alert and breathing but with injuries or in water; etc.

Charlie Level Response

- Lights and siren response
- Patient condition may be life or limb threatening
- Condition requires timely intervention
- Advanced Life Support (ALS) may be required
- Examples: allergic reaction with difficulty breathing or swallowing; back pain with fainting or near fainting; breathing problems; burns with difficulty breathing or building fire with persons reported inside; diabetic not alert, behaving abnormally, or having problems breathing; overdose with violence, abnormal breathing, or not alert; etc.

Delta Level Response

- Lights and siren response
- Patient condition may be life or limb threatening
- Condition requires timely intervention
- Advanced Life Support (ALS) is required
- Examples: allergic reaction with severe respiratory distress, or not alert, or condition worsening; assault – unconscious or not alert, abnormal breathing, dangerous body area, multiple victims; burns with multiple victims, unconscious or arrested, not alert; chest pain with severe respiratory distress, not alert, or clammy; convulsions or seizures, not breathing; continuous or multiple seizures, irregular breathing; diabetic unconscious; etc.

Echo Level Response

- Dispatched as soon as condition is identified (from Case Entry Protocol)
- Known or suspected cardiac arrest; choking verified or ineffective breathing; hanging; strangulation; unconscious with ineffective breathing; electrocution with ineffective breathing; etc.

EHS MFR Services acknowledges and thanks the EHS Medical Communications Centre officers and management for their dedication in providing support to the EHS MFR agencies throughout Nova Scotia.

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