

Community Paramedicine: A Part of an Integrated Health Care System

Abstract

In this time of fiscal health restraints where resources, both human and financial, are stretched to the limit, an innovative design for the delivery of primary health care to two (2) island communities is underway. Community paramedicine, while not a new idea, has never before been used in collaboration with a nurse practitioner and an off-site physician. This is the delivery model currently being used on two (2) isolated, island communities in Nova Scotia known as Long and Brier. There has been a 23% decrease in Emergency department visits from Islanders since this delivery model has been implemented.

Background

The islands of Long and Brier are approximately a thirty-minute drive from Digby, Nova Scotia with access to both Islands restricted to passenger car ferries. The total population of both Islands is approximately 1240 year round residents with the numbers swelling temporarily during the summer months. Transport from the farthest island, Brier, is a 50-minute trip requiring two ferries to reach the general hospital in Digby. The regional hospital requires an additional hour of travel time.

In rural Nova Scotia, health care is not as readily available as in the urban centers. As a result, rural communities are repeatedly challenged to provide accessible health care to their populations. The residents of the Island's communities recognized this need and in conjunction with Emergency Health Services Nova Scotia (EHS) launched a three-year multi-phased initiative.

The first phase provided twenty-four hour/7 days a week (24/7) emergency paramedic coverage on the Islands. To this end, an ambulance base was established in Freeport on Long Island. An abandoned clinic, which had originally housed the Island's physician, was renovated to accommodate the paramedics.

The second phase consisted of paramedics administering flu shots, holding clinics and checking blood pressures. Policies, procedures and protocols

necessary to the safe delivery of this type of patient care were developed by EHS. In addition, paramedics began to take phone calls from the community residents for non-emergent services such as diabetic checks.

The third phase of the project saw the addition of a nurse practitioner able to care for patients through a collaborative practice agreement with a physician located in the town of Digby. With the nurse practitioner's scope of practice, came an expansion of the types of services available to the Island residents. As a result, paramedics were able to complete more complex care such as wound care, take part in flu clinics and become involved in community preventive education sessions, e.g. fall prevention in seniors.

The project's focus dramatically altered the traditional work of the paramedics. Accustomed to quickly responding to emergency calls within a specified period of time, paramedics were now being called upon to, among other things, share a cup of tea with island residents as part of a falls prevention assessment where the paramedics assessed both resident and their environment for fall hazards.

A community liaison committee identified a need for drawing blood for routine tests since this required a two (2) hour minimum round trip to the Digby General Hospital. As a result, a learning session designed to teach paramedics phlebotomy skills was developed. Several other learning sessions were also provided. These sessions included, but were not limited to, congestive heart failure assessment, administration of antibiotics, wound care, urinalysis assessment, suture/staple removal, diabetic assessments and medication compliance.

Community Introduction

Informing the community of the new programs created to deliver health care proved to be a challenge. To address this, several community town hall meetings were held. These forums served to not only inform but also to solicit feedback from the community. Several other forms of media were also used. These included articles in the local newspaper and a pamphlet describing the services and how to access them.

Providing a service built on the needs of the public and the community required a community health needs assessment. To accomplish this, a survey was distributed to community residents. Survey data results were collected and entered into a database. Though confidential, it allowed health care

professionals to plan programs according to information derived from the survey.

Program Implementation

Based on the identified community needs, programs were designed and clinics were scheduled. Paramedic educational sessions were provided to enable paramedics to become proficient in handling patients on a non-urgent basis.

Patients requiring community paramedic services could access the service in several ways. Patients or their families call and request a visit; family physicians request the service directly or the nurse practitioner refers patients. As an example, a male resident sustained a partial thickness burn to his entire lower right leg. Initially paramedics transported him to the general hospital as an emergency call. Upon his return to the Island, daily dressings changes were required. Paramedics completed this daily dressing with the nurse practitioner available for consultation as required. Following physician orders, the paramedics completed the sterile dressing each day for three weeks. As a result, the burn injury was completely healed within a four-week period with no adverse effects.

The following is yet another example of the type of services being offered. An elderly Islander was having large fluctuations in blood glucose levels due to medications for non-insulin dependant diabetes. The patient's physician changed the dosage to better regulate the blood glucose and decrease the fluctuations. Paramedics completed a week of daily house visits to check the blood sugar. Subsequently, the patient's medications dosage was successfully altered without the patient having to travel daily to the hospital for a blood glucose check.

Collaborative Relationships

The Islands are home to three fire departments and a Coast Guard station. The fire departments are very active in the community with many of the members having completed the education necessary to be medical first responders.

Paramedics have been participating in monthly educational sessions aimed at enhancing the local first responder's theoretical base. Each month a lecture is taught on a topic of interest chosen by the first responders. In conjunction with the theory, a practical skills station is set up. First responders are then

required to practice what they have been taught. For example: A lecture on proper documentation was followed by a rotation to a skills station, which allowed the first responder to care for a patient and then practice completing the paperwork.

Coast Guard members have participated in several of these educational sessions and have played an active role in a mock scenario that required a rescue at sea.

Community paramedics have also developed collaborative relationships with the VON and home care programs as they work together to provide for the health care needs of the community.

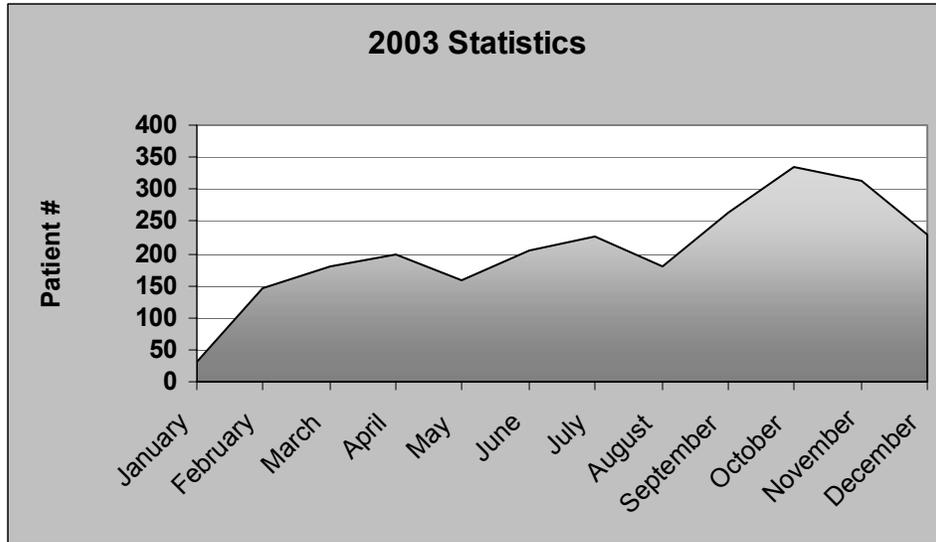
Community Programs

A new addition to the services being offered is the adopt-a-patient program. This program is designed to provide consistency and continuity of care for patients. Patients requiring frequent visits for such things as wound care or a congestive heart failure assessment are placed up for “adoption”. A paramedic then signs up to care for that patient and is responsible to set up times for regular visits. The program has been well received.

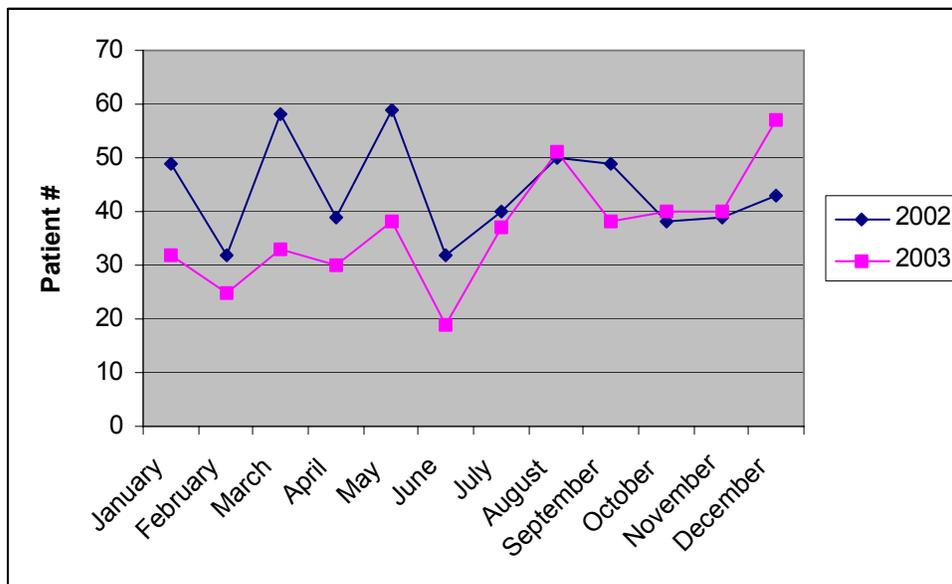
Several other programs designed to supplement the day-to-day services include bicycle helmet safety, CPR and first aid courses and proper car seat installation.

Statistics

Initially, the community use of the services was slow, however, within two months, a sharp increase in utilization occurred. The following graph depicts the use of services over a one-year period.



In addition, Emergency Department visits by Islanders decreased by 23% shown in the graph below for the years 2002 and 2003.



Conclusion

Fiscal restraints, long travel times, isolation and inability to recruit a physician combined to force a remote Island(s) community off the coast of Nova Scotia to look at an innovative service delivery model. As a result, the Community Paramedicine service was created. This service integrates the traditional work of paramedics with the non-traditional – i.e. working collaboratively with a nurse practitioner/off-site physician. The result has

seen a decrease in Emergency department visits and approximately 250-300 patient contacts/month.

Community paramedicine's adaptability and versatility within the confines of safe practice make it an ideal option for remote, isolated difficult to resource communities.

Debbie Misner R.N., BScN
Project Coordinator
Long and Brier Island Community Paramedicine