

Community Paramedicine: Part of an Integrated Healthcare System



By Debee Misner, RN, BScN

In a time of fiscal health restraints where resources, both human and financial, are stretched to the limit, an innovative design for the delivery of primary healthcare to two isolated Nova Scotia 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. Since this delivery model was implemented, there has been a 23% decrease in emergency department visits from citizens of Long and Brier Islands.

Background

Long and Brier are approximately a 30-minute drive from Digby, Nova Scotia, with access to both islands restricted to passenger car ferries. The total population of both is approximately 1,240 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, healthcare is not as readily available as in the urban centers. As a result, rural communities are repeatedly challenged to provide accessible healthcare to their populations. The residents of the

islands' 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 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.

A community liaison committee identified a need for local routine blood drawing, since this required a two-hour minimum round trip to the Digby general hospital. As a result, a learning session designed to teach paramedics phlebotomy skills was developed.

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 Digby. With the nurse practitioner's scope of experience came an expansion of the types of services available to the island residents. As a result, paramedics were able to provide more complex care (such as wound care), take part in flu clinics and become involved in community preventive education sessions, e.g., fall-prevention program for 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 fall-prevention program where the paramedics assessed residents and their environments for fall hazards.

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Community Introduction

Informing the community of the new programs created to deliver healthcare 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, including 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 required a community health assessment. To accomplish this, a survey was distributed to residents, and results were collected and entered into a database. Though confidential, it allowed healthcare 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. Educational sessions were provided to enable paramedics to become proficient in handling patients on a non-urgent basis.

Patients requiring community paramedic services access them in several ways: Patients or their families call and request a visit; family physicians request the service directly; or the nurse practitioner refers patients. For 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 dressing changes were required. Following physician orders, and with the nurse practitioner available for consultation, the paramedics changed 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.

In another example, an elderly islander was having large fluctuations in blood glucose levels due to medications for non-insulin-dependent 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 patient's blood sugar. Subsequently, the patient's medication 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 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 responders' 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, and 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 played an active role in a mock scenario that required a rescue at sea.

Community paramedics have also developed collaborative relationships with the Victorian Order of Nurses (a national, not-for-profit healthcare organization) and homecare programs as they work together to provide for the healthcare needs of the community.

Community Programs

A new addition to the services being offered is the adopt-a-patient program, 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 for "adoption." A paramedic then signs up to care for that patient and is responsible for scheduling 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.

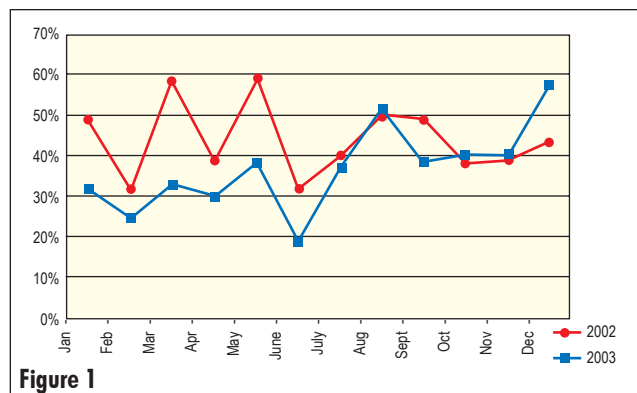


Figure 1

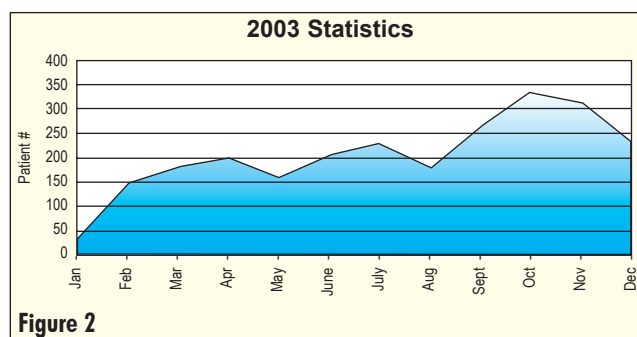


Figure 2

Statistics

Initially, the community use of the services was slow; however, within two months, a sharp increase in utilization occurred. Figure 1 depicts the use of services over a one-year period. In addition, emergency department visits by islanders decreased by 23% for the years 2002 and 2003 (see Figure 2). There are approximately 250–300 patient contacts per month.

Conclusion

Community paramedicine integrates the traditional work of paramedics with the non-traditional, i.e., working collaboratively with a nurse practitioner/off-site physician. Its adaptability and versatility within the confines of safe practice make it an ideal option for remote, difficult-to-resource communities. ■

Debbie Misner, RN, BScN, is a critical care resource nurse for a district health authority in Nova Scotia. She is currently working toward a master's of nursing with advanced nurse practitioner. Debbie became interested in paramedicine prior to the provincial system being established in 1996. Since becoming a quality control person for Emergency Health Services Nova Scotia in 1997, she has worked closely with paramedics. The opportunity to assist in the establishment of a remote community paramedicine project came in late 2002. The experience was rewarding and the project remains in operation to date.