



# Use of palliative care services in a semirural program in British Columbia

*Diane E. Allan, MA*
*Research Associate and PhD Student, Centre on Aging, University of Victoria, Victoria, BC*

*Shelly Waskiewich, BA*
*Research Assistant and MA Student, Centre on Aging, University of Victoria, Victoria, BC*

*Kelli I. Stajduhar, RN, PhD*
*Assistant Professor, Centre on Aging and School of Nursing, University of Victoria, Victoria, BC*

*Darcee Bidgood, RN, MN*
*Clinical Nurse Specialist, Vancouver Island Health Authority, Victoria, BC*

*Correspondence to:*
*Ms Diane E. Allan, Centre on Aging, University of Victoria, Sedgewick A, PO Box 1700, Stn. CSC, Victoria BC V8W 2Y2; fax 250 721-6499*

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**Introduction:** Although specialized palliative care services in rural areas are scarce, many people who are dying, and their families, want to remain in their homes or within their own community. As such, semirural communities across Canada have developed a variety of initiatives to address this need. The purpose of our paper is to describe a semirural palliative care program located in British Columbia.
**Methods:** We used univariate and bivariate analyses to examine all patients for whom a palliative care bed was requested in the Saanich Peninsula Hospital Palliative Care Unit (PCU) between Jan. 1, 2005, and Dec. 31, 2006.
**Results:** Data suggest that there is provision of care for local residents in this semirural community. Throughout 2005 and 2006, SPH received a total of 411 requests for a palliative care bed with about three-quarters of admissions coming from other units within the hospital and from local residents.
**Conclusion:** Use of services data collected from hospital charts can provide valuable information to help inform program and policy decision-makers. Yet such information is limited in relation to answering the question of whether the end-of-life needs of local residents are being met. Future studies should consider input from families and patients to enhance our understanding of the role of a PCU in a semirural environment.

**Introduction :** Bien qu'il existe peu de services de soins palliatifs spécialisés dans les régions rurales, bon nombre de personnes en fin de vie, ainsi que leurs familles, souhaitent rester dans leur domicile ou dans leur propre communauté. C'est pourquoi des communautés semi-rurales dans tout le Canada ont mis en œuvre divers projets pour répondre à ce besoin. Dans cet article, nous décrivons un programme de soins palliatifs semi-rural en Colombie-Britannique.
**Méthodes :** Nous avons effectué des analyses unidimensionnelles et bidimensionnelles de toutes les demandes de lits en soins palliatifs à l'unité des soins palliatifs (USP) de l'hôpital de la péninsule de Saanich entre le 1er janvier 2005 et le 31 décembre 2006.
**Résultats :** Les données indiquent que l'on a prévu des soins pour les résidants locaux de cette communauté semi-rurale. En 2005 et 2006, l'hôpital de la péninsule de Saanich a reçu 411 demandes de lits en soins palliatifs et environ les trois quarts des patients admis provenaient d'autres unités de l'hôpital ou étaient des résidants locaux.
**Conclusion :** Les données sur les services extraites des dossiers de l'hôpital peuvent fournir des renseignements précieux pour informer les décideurs en matière de programmes et de politiques. Pourtant, de tels renseignements ne suffisent pas pour répondre à la question de savoir si les besoins de fin de vie des résidants locaux sont satisfaits. Les recherches futures devraient tenir compte des commentaires des familles et des patients pour mieux comprendre le rôle d'une USP dans un milieu semi-rural.

## INTRODUCTION

It is well documented that Canada's large rural areas, characterized by sparse populations, fewer services and greater distances, present a major challenge to residents in need of health care services.[1–5] Those requiring end-of-life care are no exception.[6] Canada's first palliative care programs were developed in the 1970s and have evolved into programs with a primary aim of



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relieving suffering and improving quality of life for those living with a life-threatening illness or dying from the illness.[7] Yet palliative care programs in rural and remote areas remain limited.[8] Furthermore, information on the rate of use of these programs is largely unknown. The purpose of our paper is to describe the use of palliative care services in a semirural palliative care program located in British Columbia.

## BACKGROUND

A 2000 Canadian Medical Association (CMA) study defined rural as living in a community with 10 000 or fewer residents.[9] This means that about 30% of Canadians live in rural areas of Canada, yet these areas cover 95% of Canada.[10] According to the CMA study, 90% of rural residents had access to ambulatory, basic laboratory and radiography services, yet access to more specialized services was limited.[9] Indeed, less than two-thirds had access to ultrasonography, fluoroscopy, blood banks and chemotherapy, and only 9% had access to computed tomography scans and nuclear medicine. Thus it is not surprising that access to services drives use of services. For example, studies conducted in Canada typically report that older rural adults use fewer specialist services than older urban adults.[1,2,11,12] Moreover, older rural adults tend to have longer hospital stays than older urban adults because of the lack of hospitals close to their homes.[11,13] Finally, older rural adults tend to receive higher rates of home care services than their urban counterparts.[3,11]

Given the above, it is not surprising that the provision of palliative care services in rural areas is also limited. Overall, individuals in rural communities describe local health care services as dependable, accessible, of good quality and available when required.[14,15] Yet, as is often the case at the end of life, issues arise when specialized tertiary care is required.[5,14] Travelling long distances to receive this specialized care can be difficult on both the sick patient and the family members. Cost of travel and accommodations, receipt of care by strangers, and being separated from family and friends for extended periods of time are just some of the issues that must be considered when health care services are not available locally.[14,15]

In some situations, care may be available locally, but is unsuitable in terms of palliative care.[8] For example, immediate access to medications for pain management may be limited, especially for individuals who are being cared for at home. Furthermore, the specialized training of health care professionals in palliative care may be inadequate in rural areas.[16] In other words, these professionals are available, but they may not have the training specific to palliative care required for the provision of quality end-of-life care. Although specialized palliative care services in rural areas are scarce, many people who are dying, as well as their families, want to remain in their homes or within their own community.[5,16] Therefore, the provision of palliative care within these communities is an important component of the health care system.[8,16] For this reason, communities across Canada have developed a variety of initiatives to address the palliative care needs of semirural residents. The Sannich Peninsula is one such community and is the basis for our paper.

## METHODS

The Saanich Peninsula is located about 30 km from Victoria, BC. It is characterized by 3 small communities that consist of farms and pockets of residential areas with a total population of 37 883.[17] This agricultural/residential mix, coupled with a proximity to Victoria, makes the Saanich Peninsula semirural in nature.

As is the case in many rural communities, farms on the Saanich Peninsula have remained in the same families for years. This continuity in residents over generations has created a strong sense of community, including strong ties to the local hospital, Saanich Peninsula Hospital (SPH). Since the 1970s, residents have had access to a community hospital that provides acute (48 beds), residential (144 beds), emergency and outpatient services. In 2002, a 10-bed palliative care unit (PCU) was opened in the acute section to meet the demands of an aging population and residents' desire to receive end-of-life care as close to home as possible.

Also located on the Saanich Peninsula are 4 Aboriginal communities. An important aspect of providing end-of-life care to Aboriginal patients is to include culturally appropriate modifications to the care plan.[18] To meet the unique needs of the Aboriginal residents on the Saanich Peninsula, 2 special palliative care rooms were designed whereby cultural practice could take place if desired. For example, these rooms have direct outside access, allowing the body to be transferred directly from the bedroom to outside after death, eliminating the need for it to move through the halls.

In terms of human resources in the PCU, the

family physician retains overall responsibility for the patient, and a part-time palliative care physician provides expert clinical consultation, education and support for program planning and development 2 mornings a week, as well as telephone support for crisis management. When patients require a family physician, such as those admitted to the PCU from outside communities, 1 of a core group of 12 physicians takes over the care of these patients. These 12 physicians have taken an interest in palliative care and have received additional educational and other support for their role. As well, any family physician who has hospital privileges can admit patients to the PCU; therefore many of the physicians in the community have furthered their palliative skills. Nursing care in the unit is provided by registered and licensed practical nurses with the support of the clinical team. Support positions shared with acute care units include a clinical coordinator, a nurse educator, a clinical nurse specialist, a nurse manager, a social worker and allied health professionals (e.g., physiotherapists, nutritionists, pharmacists). Volunteers are also an integral part of the SPH PCU. A more detailed description of the program has been previously described.[19]

To examine trends in program use and provide information for service planning and further program development, a database containing service use information was created for the program. We describe the use of our program for the 2-year period that data are available. The study population includes all those who requested a palliative care bed in the PCU between Jan. 1, 2005, and Dec. 31, 2006.

### Instruments

Before the opening of the SPH PCU, 3 data collection instruments were jointly developed by SPH staff and local university researchers. The process of developing the instruments and database was extensive. First, existing Canadian program databases were reviewed to determine the variables most appropriate to capture patient and program characteristics. These variables were then cross-referenced to ensure congruency with national and provincial standards in palliative and end-of-life care. Next, data collection tools and a data dictionary were developed, followed by pilot testing and refinements. Finally, appropriate computer software was selected and a database developed. The instruments were completed by staff and analyzed by researchers at the local university.

### Data analysis

We used frequencies to describe the program. Data are presented for 2005 and 2006 as well as the 2 years combined. We used $\chi^2$ and $t$ tests to assess differences between the 2 years for admission and discharge characteristics, as well as use of services. All analyses were done using SPSS 15.0 (SPSS, Inc.).

### Variables

Using the instruments, information was collected on patient demographics, admission and discharge characteristics, and receipt/nonreceipt of services provided. Length of stay (LOS) variables were calculated based on the various date variables included in the instruments (e.g., date of admission, date designated palliative, date of bed request). In cases where the 2 dates were the same, an LOS of 0 days was assigned. One patient characteristic measured at both time of bed request and time of admission is physical performance. This is done using the Palliative Performance Scale (PPS), which measures physical performance in increments of 10%, where a PPS of 100 corresponds to full ambulation and health, and a PPS of 0 corresponds to death.[20]

## RESULTS

Table 1 presents the characteristics of patients admitted to the SPH PCU. Throughout 2005 and 2006, SPH received a total of 411 requests for a palliative care bed. The average PPS score at the time of both bed request and actual admission was 40. A person with a PPS score of 40 is characterized as one who is mainly in bed, cannot do any work, has extensive evidence of disease, requires assistance with physical care, has normal or reduced intake, and may be fully conscious, drowsy or confused. When admitted to a PCU with a PPS of 40, staff can estimate that this person has 10–30 days to live.

Admission and discharge characteristics are presented in Table 2. Of the 411 bed requests, 335 patients were admitted, which represents about 1 new admission every 2 days. The main reasons for nonadmission included the following: a bed was available but the patient or family changed their mind (33.3%), a bed was unavailable and the patient died before admission (26.1%), and a bed was unavailable and the patient was admitted elsewhere (18.8%). There were only 6 patients in both 2005 and 2006 ($n$ = 12) for whom admission to the PCU was not appropriate. Primary reasons for

inappropriateness included the following: the prognosis for survival was greater than 3 months, the complexity of the case was too great for unit resources and the prognosis was imminent death (within hours).

Those admitted from acute or emergency units at 1 of the 3 hospitals in the Greater Victoria Area spent a median of 2 days in their respective unit before being designated as palliative patients and subsequently transferred to SPH PCU. For most cases, the request for a palliative bed at SPH, once a palliative designation was made, occurred on the same day. Once admitted to the PCU, the overall median LOS for people admitted from acute and emergency units, as well as from their home, hospice or a long-term care facility, was 7 days.

The SPH PCU provides social work, liaison, physiotherapy, palliative care physician and clinical nurse specialist services. Although data for this section are incomplete, the data available suggest that social work services were the most frequently used, followed by liaison and physiotherapy services.

When data were examined by year, there were no significant differences for admission and discharge characteristics with the exception of the reason for admission to the PCU ($\chi^2 = 9.83$, $df = 3$, $p = 0.02$). In 2005, more admissions resulted from requests by patients and families or because there was no caregiver available, and in 2006 the most frequently reported reason for admission was symptom management. The use of liaison, physiotherapy and clinical nurse specialist services declined from 2005 to 2006.

**Table 1. Patient demographics**

| Characteristic | % of patients* | | |
|---|---|---|---|
| | Year 1, $n = 171$ | Year 2, $n = 164$ | Total, $n = 335$ |
| Age, yr | | | |
| Median | 80.0 | 81.5 | 81.0 |
| Range | 29–100 | 30–99 | 29–100 |
| Marital status | | | |
| Married/common law | 49.4 | 65.1 | 57.1 |
| Widowed | 38.0 | 25.7 | 31.9 |
| Divorced/separated | 7.0 | 7.2 | 7.1 |
| Never married/single | 5.7 | 2.0 | 3.9 |
| Sex | | | |
| Female | 57.3 | 50.6 | 54.0 |
| Male | 42.7 | 49.4 | 46.0 |
| Aboriginal origin | 1.2 | 1.8 | 1.5 |
| Diagnosis | | | |
| Cancer | 60.1 | 70.3 | 70.3 |
| Noncancer | 39.9 | 29.7 | 29.7 |
| PPS score | | | |
| At time of bed request | 40 | 40 | 40 |
| At time of admission | 40 | 40 | 40 |

PPS = palliative performance scale.
*Unless otherwise indicated.

## DISCUSSION

The purpose of our paper was to describe the use of a PCU in a semirural hospital. From a service use perspective, our data suggest that there is provision of care for local residents. Indeed, about three-quarters of admissions to the SPH PCU come from other units within the SPH and from local residents. This is important information as it supports the overall program goals. Yet, from the perspective of

**Table 2. Admission and discharge characteristics**

| Characteristic | % of patients* | | |
|---|---|---|---|
| | Year 1, $n = 171$ | Year 2, $n = 164$ | Total, $n = 335$ |
| No. of bed requests | 214 | 196 | 411 |
| Source of referral | | | |
| Family physician | 33.3 | 34.1 | 33.7 |
| Unit coordinators | 25.1 | 20.1 | 22.7 |
| Home nursing care | 12.3 | 17.1 | 14.6 |
| ED physicians | 6.4 | 12.8 | 10.2 |
| Other | 22.9 | 15.9 | 18.8 |
| Appropriate to unit | 96.7 | 96.9 | 96.6 |
| Appropriate but not admitted | 21.7 | 18.8 | 16.8 |
| Admitted from | | | |
| Hospital 1 (SPH) | 50.9 | 57.9 | 54.3 |
| Home (local) | 22.2 | 19.5 | 20.9 |
| Home (nonlocal) | 5.8 | 7.9 | 6.9 |
| Hospital 2 (VGH) | 7.6 | 5.5 | 6.6 |
| Hospital 3 (RJH) | 5.3 | 5.0 | 5.1 |
| Hospice | 3.5 | 1.2 | 2.4 |
| Long-term care | 1.2 | 1.2 | 1.2 |
| Other | 3.5 | 1.8 | 2.6 |
| Reason for admission | | | |
| Symptom management | 26.3 | 39.6 | 32.8 |
| Imminent death | 24.6 | 27.4 | 26.0 |
| Patient/family request | 28.1 | 19.5 | 23.9 |
| No caregiver available | 18.1 | 11.6 | 14.9 |
| Other | 2.9 | 1.9 | 2.4 |
| Reason for discharge/transfer | | | |
| Death | 80.1 | 79.5 | 79.8 |
| Stabilized to go home | 13.5 | 13.7 | 13.6 |
| Other | 6.4 | 6.8 | 6.6 |
| Discharged/transferred to | | | |
| Death | 80.1 | 79.5 | 79.8 |
| Home | 14.0 | 14.3 | 14.2 |
| Hospital | 1.8 | 3.1 | 2.4 |
| Hospice | 0.6 | 0.6 | 0.6 |
| Other | 3.5 | 2.5 | 3.0 |

ED = emergency department; RJH = Royal Jubilee Hospital; SPH = Saanich Peninsula Hospital; VGH = Victoria General Hospital.
*Unless otherwise indicated.

patients and family members, the role of the PCU in meeting local needs remains unknown.

Despite the lack of patient and family member input, it is still possible to explore a number of service use patterns within this unit. For example, even though rooms to accommodate the end-of-life needs of Aboriginal residents are available, uptake among this population remained low across both years of the study. At this time, initiatives continue to help inform and familiarize Aboriginal people with the palliative program and unit. These iniatives include tours of the unit, sharing circles about end-of-life issues, and meetings with health care providers and leaders in communities.

The short LOS by patients in the PCU is consistent with other palliative program experiences. For example, in an examination of palliative services in a semirural community in Britain, Herd[21] found that, of those admitted to hospital, just over half had an LOS of less than 10 days. A short LOS is not unexpected given trends around preference for location of death. It is well documented that most people prefer to die at home;[22] however, a home death is not always possible. The inability to provide adequate symptom management in the home setting is a major factor in the decision to transfer the patient to a more appropriate setting where his or her care needs can be met. Indeed, the primary reason for admission to the PCU in our study, as well as in the study by Herd,[21] was symptom management. This decision to stay at home as long as possible suggests that patients enter the PCU very near the end of life, resulting in a short LOS in the PCU.

In terms of service use, figures have declined from 2005 to 2006 for a number of the services. As the figures are incomplete, it is unknown whether they accurately represent trends in use of services. What is known, however, is that the provision of these services is more complex than just the issue of receipt/nonreceipt as captured in the hospital charts. To determine possible explanations for trends in service use patterns it is necessary to look beyond simple dichotomies and begin to ask questions of patients and family members about the importance of, and satisfaction with, the provision of these services.

Finally, trends indicate that the PCU is not only being used in an appropriate manner as originally conceived, but also that the beds are in high demand and are often unavailable. Indeed, our findings suggest that almost 45% of all reasons for nonadmission are because a bed is not available. This pattern may suggest that the number of palliative care beds needs to be increased. However, a closer examination of the factors that influence reasons for nonadmission are required to make that determination.

## CONCLUSION

Data on use of services collected from hospital charts can provide valuable information to inform program and policy decisions. Yet, such information is limited in relation to answering the question of whether end-of-life needs of local residents are being met. Future studies should consider input from families and patients to enhance our understanding of the role of a PCU in a semirural environment.

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