Economic Evaluation of Two Regional Palliative Care Programs for Terminally Ill Cancer Patients

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Key Implications for Decision Makers

- Access to palliative care services has increased from 45 percent to 81 percent for terminally ill cancer patients between 1993 and 2000 as a result of introducing comprehensive, regional palliative care programs in two large urban centers.

- Comprehensive, integrated palliative care programs can be implemented at no additional cost to the healthcare system in large urban settings. These findings support the introduction and expansion of palliative services where none currently exist. Where services already exist, these findings will help to maintain budgets in the face of increasing demands for shifting resources into other healthcare services.

- Acute care continues to account for the majority of costs at end-of-life. We identified health care services totaling $28,093 per person, two-thirds of which were provided by hospitals to terminally ill cancer patients in their last year of life. Physician services (10 percent), residential hospice care (8 percent), nursing home care (6 percent), homecare (6 percent) and prescription medications (3 percent) made up the rest. Age, gender, socioeconomic status, cancer diagnosis, disease burden, geographic, and healthcare system variables are significant predictors of these costs.

- Co-ordination of palliative care services meant that terminally ill cancer patients spent less time in hospital between 1993 and 2000, freeing up 74 beds per year between Edmonton and Calgary. A reduction in the demand for acute-care beds over this time period was achieved by providing additional palliative homecare and residential hospice care.

- Decision makers need to continue to develop communication initiatives that will inform the public regarding palliative care so that they can make informed decisions regarding quality end-of-life care for themselves and their families.

- Decision makers should continue to invest in management and collecting data in order to generate a strong evidence base upon which to improve decision-making in palliative care.
Executive Summary

Context

One in three Canadians is diagnosed with cancer at some point in his or her life, and about half of those people die of the disease. A review of the literature reveals there is a lack of large-scale, comparative studies of palliative care innovations — the net result of which is a small evidence base upon which decision makers can rely.

The objective of this study is to describe, explain and evaluate the economic consequences of introducing two comprehensive, co-ordinated and integrated palliative care programs in two large urban centres in Alberta, Canada.

This report brings out many implications for decision makers in all areas of healthcare. Those in clinical practice should continue education to maintain quality of existing palliative-care services, and expand knowledge of palliative-care management and services to other healthcare professionals, to improve practice, referral and overall access. In addition, clinicians need to recognize the value of palliative care, encourage participation in existing palliative-care services, and provide adequate clinical support for and education of family physicians in the care of terminally ill patients in the community and acute-care settings.

In the area of program management, it is important that new services and initiatives — including shared-care models with other healthcare teams — be implemented that further enhance access, co-ordination, quality of care, and appropriate use of resources. Furthermore, resources for residential hospice and homecare should be increased to allow patients to move out of acute care sooner, and decision makers should co-ordinate with the existing community and volunteer resources that already provide end-of-life care for palliative patients.

Policy makers can play an essential role by advocating for health-policy changes that ensure adequate public funding for palliative care, including continued investment in care provided to terminally ill patients in community settings. This is particularly important as palliative care supports more appropriate use of expensive acute-care facilities.
Public expectations around palliative care need to be shaped with communication initiatives that will provide information to allow people to make informed decisions. The significant contribution of families in sustaining a community-based model of care should also be recognized and supported.

Finally, data capture and management in palliative care needs to be better managed. For example, a “medical records culture” should be encouraged among providers who work in community settings. Decision makers must continue to invest in tracking data and management in all settings to create a strong evidence base which will improve decision-making. This can be accomplished in Alberta with partnerships between the Alberta Cancer Board, Alberta Health and Wellness, Regional Health Authorities and palliative care programs.

**Approach**

This study used a before and after analysis of linked administrative data for adults who died of cancer between April 1993 and March 2000 as residents of Edmonton or Calgary, Alberta. Individual, anonymized data from the cancer registry was linked to vital statistics, two palliative care program databases, and administrative databases managed by Alberta Health and Wellness. The latter databases contain information on use and cost of hospital and physician services, outpatient prescriptions, nursing homecare, and homecare.

**Results**

The results of the study show that access to palliative care increased from 45 percent to 81 percent between 1993 and 2000. As well, terminally ill cancer patients spent less time in hospital between 1993 and 2000, freeing up 74 beds per year in Edmonton and Calgary. Much of this time was spent in palliative home care (3.4 percent) and residential hospice care (2.4 percent or 61 beds). Despite this, acute care still accounts for most of the cost at the end of life. Two-thirds of $28,093 in services we identified were provided by hospitals to terminally ill cancer patients in their last year of life. Physician (10 percent), residential hospice care (eight percent), nursing home care (six percent), homecare (six percent) and prescription medications (three percent) comprised the remainder.
Many variables explain these results, including patient age, gender, socioeconomic status, cancer diagnosis, disease burden, and geographic location, as well as various healthcare system factors. The results clearly showed that comprehensive, integrated palliative care programs were implemented at no additional cost to the healthcare system.