

Estimates of the Cost of Proposed Home Care Services

Peter C. Coyte, PhD: Professor of Health Economics, Department of Health Policy, Management and Evaluation, University of Toronto. peter.coyte@utoronto.ca

1.0 Introduction

The proposed Accord on Health Care Reform (January 21, 2003) highlights three priority health care areas for Federal investment: primary care; home care; and catastrophic drug coverage. While all of these areas for investment are important, this brief focuses exclusively on home care services. Specifically, annual estimates are advanced for three particular categories of home care services: short-term acute care; community mental health services; and end-of-life care.

The national expenditure estimates described below are based on the premise that each of the three home care services will be subject to the universality provision (and other principles) of public health insurance associated with the Canada Health Act. As a consequence, the home care services singled out for targeted investments are to be available to all Canadian residents on uniform terms and conditions.

We begin in Section 2.0 with annual estimates for a national short-term acute care (or post-acute home care) Program. Section 3.0 yields estimates for a national community mental health service Program, while Section 4.0 yields estimates for a national end-of-life (or palliative) care Program. A summary is offered in Section 5.0.

2.0 Short-Term Acute Care (or Post-Acute Home Care)

In this Section, we will use the term Post-Acute Home Care interchangeably with Short-Term Acute Home Care. Such care refers to the use of home care following hospitalization to aid recovery and rehabilitation. Extensive work has been pursued to yield estimates of the cost of a National Post-Acute Home Care (PAHC) Program.¹ Indeed, while such research formed the basis for the recommendations included in the recent Senate Report on the state of the health care system in Canada,² the estimates derived for the recent Romanow Report³ were significantly lower. In this Section, estimates are outlined for a National Post-Acute Home Care Program.

Post-Acute Home Care is defined as the receipt of home care services (professional services and personal support) in a care recipient's place of residence within thirty days of discharge following hospitalization for either same day surgery or inpatient care. While there is consensus on who might qualify for PAHC, the eligible duration of home care that is deemed to be attributable to the hospital episode is uncertain. Using data from the province of Ontario, more than 50% of PAHC episodes last less than 30 days, 70% last less than 60 days, and only 12.7% extend beyond 6 months.¹ Moreover, given the tendency to diminish service intensity over the episode of home care, PAHC cost estimates are unlikely to be that sensitive to the duration of the PAHC episode beyond the first 30 to 60 days following discharge. Thus, the costs estimates outlined herein are based on the following definition of the PAHC episode: all home care services received between the first date of service provision following hospital discharge, if that date

occurs within thirty days of discharge, and extending until one year following the first home care service date post-discharge.

In addition to the direct professional and personal support service costs incurred in the provision of PAHC, there are pharmaceutical and equipment expenditures as well as the indirect costs of case management and program administration. In order to offer appropriate care these additional costs need to be estimated to derive the full cost of a National PAHC Program.

Four factors were used to develop costs estimates for a National PAHC Program. First, public home care expenditures for fiscal year 2000 were derived (\$2,690.9 million).⁴ Second, the portion of total home care expenditures attributable to PAHC were estimated using expenditure data from Ontario (26.5%). Third, an estimated home care expenditure inflation of 1.12 was used to convert expenditures in 2000 to equivalent fiscal year 2003 dollars. Finally, a mark-up factor designed to capture the use of pharmaceuticals, equipment, and other technologies used in the appropriate provision of PAHC was included (1.28). Consequently, **the annual cost estimate for a National Post-Acute Home Care Program was \$1,022.3 million** ($= \$2,690.9 \text{ million} * 0.265 * 1.12 * 1.28$). This estimate is akin to that advanced in the Senate Report,² but is more than three times greater than the figure recommended by Romanow.³

3.0 Community Mental Health Home Care Services

In this Section, the term Community Mental Health Home Care Services will refer to the provision of home care services to care recipients who require individualized community-based mental health supports in their place of residence.

Estimates of the annual cost of a National Community Mental Health Home Care Program derived for the Romanow Report³ were \$568.1 million. These estimates were based on an average annual caseload of 57,137 and average annual expenditures per annualized case of \$9,942.50. These estimates are equivalent to the on-going provision of three nursing visits per week and associated case management services.

In order, to assess the annual cost of a National Community Mental Health Home Care Program estimates were derived for the current and unmet need for such services, an estimate of the level of service intensity and the average unit cost of the identified services. Fortunately, significant work has been conducted on this issue by researchers at the Centre for Addition and Mental Health (CAMH), Toronto.⁵

CAMH researchers employed a planning model based on a level of care typology that included five levels from self-management (level 1) to long-term facility based care (level 5). The levels of care deemed appropriate for in-home mental health care were levels 2 and 3, while level 4 was associated with residential care. Level 2 care was estimated to comprise approximately weekly contact with the care recipient, while level 3 was associated with more intensive servicing of the care recipient. In both cases, community support workers were responsible for identifying the needs of the care

recipient and providing the required care directly or through linkage with other service providers.

Caseload estimates allocated to each of the five levels of care needs were based on a representative population-based sample, including residents of psychiatric hospitals. These estimates yielded annual caseload estimates for level 2 and level 3 care of 34,871 and 20,612, respectively. Moreover, based on cost data from two Toronto-based community support programs, the annual case costs for level 2 care (weekly individualized support) were estimated to be \$3,300, while estimates for level 3 care (multiple contacts per week) were \$6,500. Consequently, annual total cost in Ontario for Community Mental Health Home Care Services were estimated to be \$249.1 million (=34,871 * \$3,300 + 20,612 * \$6,500).

If the underlying need for and the cost of community mental health services in the rest of Canada were equivalent to those in Ontario, **the annual cost estimates for a National Community Mental Health Home Care Service would be \$648.4 million, as Ontario accounts for 38.4% of the population of Canada.**

4.0 End-of-Life Care (or Palliative Care)

In this Section, we will use the term Palliative Care interchangeably with End-of-Life Care. Such care, within the context of home care, refers to the comprehensive management of the needs of care recipients and their families when confronted with an incurable and progressive illness.⁶ The primary aim of palliative care is to relieve suffering and improve the quality of life for the living and the dying.⁷

Estimates of the annual cost of a National Palliative home care Program range from \$500 million advanced in the Senate Report,² to \$89.3 million recommended by the Romanow Report.³ Five-fold palliative care cost estimate differences warrant further consideration to minimize provincial liability expose.

There has been significant research that has assessed the need for palliative care. The main underlying conditions that appear to warrant palliative care include cancer and progressive non-malignant diseases such as diseases of the circulatory, respiratory, and nervous systems, and AIDS/HIV.⁸ Based on the work by Higginson,^{8,9} 85.7% of terminally ill cancer patients experience symptoms that may be addressed through palliative care. By combining the annual incidence of cancer-related deaths in Canada (66,200)¹⁰ with the proportion of such individuals who may benefit from palliative care (85.7%) yields estimates of the annual incidence of palliative care for terminally ill cancer patients (56,733). Moreover, combining the annual incidence of non-cancer deaths (155,344)⁹ with the proportion that may benefit from palliative care, ranging from a low of 27.5% to a high of 66.6%,^{8,9} yields estimates of the annual incidence of palliative care for terminally ill non-cancer patients. Adopting a conservative approach to the incidence of those who may benefit from and accept palliative care yields annual estimates of the incidence of palliative care of 66,302. (This figure is based on an uptake rate of 66.6% of those deemed to benefit from palliative care and an underlying benefit rate of 85.7% for terminally ill cancer patients and 27.5% for all other patients.)

In order to derive national estimates for the cost of palliative home care, the caseload estimates need to be combined with the average length of a palliative care episode (62 days for cancer patients and 84 days for non-cancer patients)¹³ and the average cost of such care (\$83.24),¹¹ including direct services, case management, and equipment and medications, etc. **The resulting annual cost estimates for a National Palliative Home Care Program would be \$394.3 million.**

5.0 Conclusions

This brief has outlined the cost of three categories of home care services that are highlighted in the Accord on Health Care Reform. The total annual cost associated with the implementation of this subset of all home care services is \$2,065 million. The largest cost category accounting for 49.5% of these expenditures is attributed to Post-Acute Home Care. The remaining costs are divided between community mental health services and Palliative care, with community mental health and palliative care accounting for 31.4% and 19.1%, respectively, of the total cost of the home care services highlighted under January 21st Accord.

Total Cost of the Home Care Services: \$2,065.0 million of which \$1,022.3 million would be for Post-Acute Home Care; \$648.4 million for Community mental health services; and \$394.3 million for Palliative care.

6.0 References:

1. Coyte PC: Expanding the Principle of Comprehensiveness From Hospital to Home. Submission to the Standing Committee on Social Affairs, Science and Technology. July 17, 2002.
<http://www.parl.gc.ca/37/2/parlbus/commbus/senate/com-e/soci-e/rep-e/coyte1-e.pdf>
2. Standing Senate Committee on Social Affairs, Science and Technology: The Health of Canadians – The Federal Role. Final Report on the state of the health care system in Canada, Volume six: Recommendations for Reform, October 2002.
3. Building on Values: The Future of Health Care in Canada, 2002. (The Romanow Report.)
4. Health Canada: Health expenditures in Canada by age and sex 1980-81 to 2000-01. Health Policy and Communications Branch, Health Canada: Ottawa, August, 2001.
5. Centre for Addition and Mental Health: Estimated Need for Home Care Support for Mental Health Needs in Ontario. Toronto, January 2003.
6. Vachon MLS: The Nurse's Role: The World of Palliative Care Nursing. In Oxford Textbook of Palliative Nursing, New York: Oxford University Press, 2001
7. Statistics Canada: Population Density, Births and Deaths, 2000:
<http://www.statcan.ca/english/Pgdb/demo01.htm>
8. Higginson IJ: Assessing the Need for Palliative Care. In Tebbit P: Palliative Care 2000 Commissioning Through Partnership: National Council for Hospice and Specialist Palliative Care Services, Land and Unwin Ltd., Northamptonshire, UK, 1999.
9. Higginson IJ: Health Care Needs Assessment: Palliative and Terminal Care. Radcliffe Medical Press Ltd., 1996.
10. Canadian Cancer Society: Deaths from all cancers in 2002:
http://www.cancer.ca/ccs/internet/standard/0,3182,3172_14423_langId-en,00.html
11. Howell D: Home Health Care Utilization and determinants by Cancer Patients at the End of Life. Unpublished PhD Dissertation, University of Toronto, 2003.