Expanding the Principle of Comprehensiveness from Hospital to Home*

Submission to the Standing Committee on Social Affairs, Science and Technology

Peter C. Coyte, Ph.D

July 17, 2002

For further information:
Dr. Peter C. Coyte, Professor of Health Economics, CHSRF/CIHR Health Services Chair, Co-Director, Home and Community Care Evaluation and Research Centre, and President, Canadian Health Economics Research Association, Department of Health Policy, Management and Evaluation, Faculty of Medicine, McMurrich Building, University of Toronto, Toronto, Ontario M5S 1A8.
Telephone (416) 978-8369; Fax (416) 978-7350; Email: peter.coyte@utoronto.ca

*Dr. Coyte is supported by funds from the Canadian Institutes of Health Research, the Canadian Health Services Research Foundation and the Ontario Ministry of Health and Long Term Care for his Chair in Health Care Settings and Canadians. Useful comments were received from Kelly Murphy and many of the issues discussed in Sections 1.0-3.0 are associated with my collaborations with Dr. Patricia McKeever. The opinions expressed in this brief are those of the author and do not necessarily reflect the opinion of any funding agency or institution.

Executive Summary

The purpose of this brief is to outline a series of financing, delivery and organizational mechanisms that extend the spirit of the *Canada Health Act* to health services and technologies that were previously provided within a hospital setting, but are now available to Canadians where they reside. To achieve this goal, three principles are invoked: first, reforms should be introduced in a phased manner with supports that further service integration; second, the comprehensiveness principle captured in the *Canada Health Act* should be broadened to include necessary health care wherever that care is sought, delivered and received; and finally, mechanisms that constrain government liabilities should be included in any reform package.

Following an introduction, Section 2.0 outlines the development of home care in Canada, with an emphasis on expenditure and financing trends, and the associated policy context that has enabled the development of the new health care order. In Section 3.0, home care is framed as a service that complements and should be integrated with services available in other health care settings. In Section 4.0, mechanisms for the financing, delivery and organization of post acute home care are described. Estimates of the total cost of a National Post-Acute Home Care Program are provided in Sections 5.0, and a brief conclusion with recommendations is offered in Section 6.0.

While an array of home-based health care services are currently provided to a range of home care recipients, including chronic and continuing care, pre-hospital care, and post-acute care, this brief focuses on *post-acute home care* (PAHC) as the first stage in the development of a National Home Care Program. A focus on post-acute home care extends the reach of the *Canada Health Act*, and improves its relevance to contemporary health care. Moreover, an emphasis on such care advances the principle of service integration, as communication between hospital and in-home service providers is essential to advance the efficient and effective allocation and use of health care services.

The establishment of a geographically separate and organizationally distinct funding program for PAHC is *not* recommended in this brief. It is argued that a separate, parallel National PAHC Program may inhibit service integration across networks of care and may limit opportunities to enhance the efficient, effective and equitable allocation and use of health care services.

Estimates of the cost of PAHC, and associated "hidden costs" including drug expenditures, range from $1,021.1 million to $1,511.8 million (in fiscal year 2002 dollars). If the federal government were to cost-share these expenditures on an equal basis with the provinces, then the federal share would range from $510.6 million to $755.9 million.

The following recommendations are presented, with the aim of enhancing service integration and ensuring that Canadians have necessary health care, irrespective of where such care is sought, delivered or received:

Recommendation 1: Post-acute home care recipients should be defined as individuals who received their first home care visit within thirty days of their inpatient or same day hospital discharge date.

Recommendation 2: An episode of PAHC should be defined as 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 up to one year following hospital discharge, for those without use of home care prior to hospitalization.

Recommendation 3: Clinical groupings for PAHC recipients should be sufficiently small that they enable the derivation of stable utilization rates for PAHC. Use of Major Clinical Categories (MCCs) and Day Procedure Groups (DPGs) satisfy these criteria.

Recommendation 4: Estimates of the mean cost of PAHC should be used to develop financing estimates for a National Post-Acute Home Care Program.

Recommendation 5: Financing for PAHC should be first directed to hospitals, but the PAHC envelope should be monitored on a regular basis to ensure the appropriate provision of such care.

Recommendation 6: To encourage innovation and service integration, and to enhance the efficient and effective provision of necessary health care irrespective of the setting in which such care is received, a rate-based method of reimbursement for PAHC should be developed in conjunction with rate-based arrangements for each episode of hospital care.

Recommendation 7: Do not restrict the range of services, products and technologies that may be used to facilitate the use of home care following hospital care.

Recommendation 8: Provide out-sourcing opportunities to hospitals so that they have the option to develop contractual relationships directly with home care service providers or with transfer agencies that may provide case management and service provision arrangements.

Recommendation 9: If contracts were formed with home care service providers, these contracts should include, in addition to rate-based reimbursement arrangements, mechanisms to monitor service quality and performance.

Recommendation 10: First dollar public health insurance coverage for PAHC should be pursued vigorously and in conformity with the terms and conditions for insurance received for other necessary health care.

1.0 Introduction

Health care in the 21st century consists of more than institutional settings and stethoscopes; it involves more than one privileged place (hospitals) and one privileged provider (physicians). Today, health care is sought, delivered and received in a wide variety of settings and is frequently mediated by user friendly and miniaturized technologies.[1-3] Indeed, the sampling of health care from many different settings is the dominant characteristic of the new health care order.

In the light of these developments in the organization and delivery of health care, the *Canada Health Act* has become increasingly irrelevant as the majority of care is beyond the scope of this legislation. Canadians expect that the federal government will take steps to ensure that publicly funded health care conforms to the five principles of universality, accessibility, comprehensiveness, portability, and public administration. However, an exclusive focus on medically necessary *hospital* and *physician* care restricts the federal government's opportunity to ensure that Canadians have access to necessary health care *wherever* that care is delivered. Consequently, the principle of comprehensiveness, embedded in the *Canada Health Act*, needs to be expanded, such that the setting for necessary care does not affect its funding.

The overarching purpose of this brief is to outline a series of financing, delivery and organizational mechanisms that extend the spirit of the *Canada Health Act*, in a staged manner, to health services and technologies that were previously provided only within a hospital setting, but are now available to Canadians where they reside. In order to achieve this objective, three tenets will be invoked: first, a National Home Care Program should be introduced in a phased manner with supports that yield service integration; second, the comprehensiveness principle currently captured in the *Canada Health Act* should be broadened to include necessary health care wherever that care is sought, delivered and received; and finally, mechanisms that constrain the liability exposure for various governments should be included in any reform.

This brief outlines, in Section 2.0, the development of home care in Canada, with an emphasis on expenditure and financing trends, and the associated policy context that has enabled the development of the new health care order. In Section 3.0, in order to highlight the potential for a more integrated approach to health reform, home care will be framed as a service that complements services available in other health care settings. In Section 4.0, mechanisms for the financing, delivery and organization of home care following hospitalisation (post-acute home care) will be outlined. Estimates of the total cost of a National Post-Acute Home Care Program are provided in Sections 5.0, and a short conclusion with recommendations is offered in Section 6.0.

While an array of home-based health care services are currently provided to a range of home care recipients, including chronic and continuing care, pre-hospital care, and post-acute care, this brief emphasizes *post-acute home care* as the first stage in the development of a National Home Care Program. A focus on post-acute home care extends the reach of the *Canada Health Act*, and improves its relevance to contemporary health care. Moreover, an emphasis on such care advances the principle of service integration, as communication between hospital and in-home service providers is essential to advance the effective, efficient and equitable allocation and use of health care services.

2.0 Home Care in Canada

Canadian medicare has grown over the last fifty years into a national program that has protected Canadians from the catastrophic economic burden of ill health by providing access to hospital and physician care according to need rather than the ability to pay. However, innovations in medical and pharmaceutical technologies as well as government fiscal priorities and the prospect of significant demographic change are increasing the range and use of diverse settings for health care. One unanticipated consequence of such change has been erosion of the protection afforded to Canadians by the *Canada Health Act*.

One setting that has become an important feature of the new landscape for health care has been the home. Within that setting, a complex array of services, products and technologies are combined with unpaid care provided by family members, friends and volunteers to advance the health and well being of Canadians. Under the home care designation, many agencies and providers participate in the provision of health and lifestyle enhancement services. The range of services is large, including nursing, social work, physiotherapy, occupational therapy, meals on wheels, and personal support.

Home Care Expenditure Growth Greater in the Private Sector:

In the last twenty years, while there has been dramatic growth in home care expenditures that may be attributed to beneficiary eligibility, accessibility, demographic change, technological change, and health service restructuring, there have been both temporal and sectoral differences in rates of growth. Specifically, while Figure 1 portrays the growth of public home care expenditures over the last two decades, it also demonstrates the reduction in the annual rate of growth of public expenditures from 17.2 percent during the 1980s to 10.4 percent during the 1990s. In contrast, private home care expenditures have accelerated over the last two decades as reported in Figure 2. The growth rate of private expenditures increased from 9.4 percent during the 1980s to 13.0 percent during the 1990s. Consequently, despite the public rhetoric about the importance of home care, the public sector's share of total expenditures has fallen in the last decade, and represents less than eighty percent of this $3.5 billion industry.[4]

Health Policy Assumptions Driving Change:

Health care practices have radically changed in the last two decades and broad spectrum of formerly publicly funded services is now delivered in the home, and more frequently, is financed through the private sector. This shift towards greater reliance on home care has been based on three commonly held assumptions.

First, it is believed that Canadians want to assume substantially greater responsibility for health care delivery at home; that they want to be discharged from acute care early; and that they want to remain in the community rather than be residents of long-term care facilities. However, evidence for this contention is rarely presented.

Second, it is further assumed that Canadian housing and employment circumstances permit the shift of safe and effective care to the home. However, even the finest modern home was not designed to facilitate the long-term provision of care, and moreover, changes to patterns of labour force participation and other competing demands on the time of unpaid caregivers raise questions about whether such caregivers will be available in the future.[5]

Finally, it is commonly assumed that equal or better care at a lower cost will result by shifting care from institutions to the home.[6-8] Two Canadian studies have reported that home care may lower (public sector) costs without adversely affecting the health of Canadians.[9-10] However, a broader review of the literature suggests first, that there is very little compelling evidence that home care is cost-effective,[11-18] and second, that any cost-savings achieved through home care tend to privilege the public sector, resulting in cost shifting to care recipients.

Distinctive Home Care Recipients:
While many individuals receive home care services to prevent or retard the deterioration of health and to assist them to maintain independence in the community, others receive such services for a short period of rehabilitation following hospitalization. The former are recipients of continuing care, while the latter are post-acute home care recipients. Recent hospital transformations through closures, mergers, dramatic reductions in lengths of stay, and radical changes to the size and function of hospitals have altered the home care caseload, with a heavier emphasis on post-acute home care recipients.

Distinctive Service Profiles:
Home care is no longer the preserve of the elderly. Forty five percent of home care recipients in Ontario are under 65 years of age and fifteen percent are children.[19] Moreover, the services profiles are distinct for the two main groups of home care clients. One group receives care for a short period of generally less than 90 days; and the other group receives care on an on-going or continuing basis. For short-term recipients, nursing services makes up the lion's share (63.0%) of home care received, with the remaining services divided between personal support (20.6%) and various other therapies (16.4%). In contrast, among continuing care recipients, personal support is the most prevalent service received (59.2%), followed by nursing care (35.5%), while therapy services are rarely received.[19]

3.0 The Home as the Health Care Hub:

Current discussion of home care as a substitute for acute or institutional care is misplaced. That discussion forces a bifurcation between the entrenched interests of medicare, on the one hand, and home and community care, on the other. In order to highlight the potential for a more integrated approach to health reform, in this Section home care will be presented as a service that complements services available in other health care settings.

Health care is sought, delivered and received in an array of settings and is mediated by (paid and unpaid) providers of care and health technologies, including medical products. These configurations of people, places and technologies are as diverse as the underlying health needs of the population. Moreover, the episodic nature of health care (diagnosis, intervention/cure, recovery/rehabilitation, and health maintenance) along with medical specialization, ensure that investments in health occur sporadically and in a range of distinct settings.

From the perspective of care recipients who encounter the new health care order on a daily basis, such geographically distinct and organizationally separate settings for health care sometimes appear antithetical to their interests. Equipped with separate missions, visions, and organizational goals and confronted with distinct economic incentives, it is not surprising to find behavioural

inconsistencies in the actions taken and the positions adopted by the various health care organizations and institutions. These inconsistencies frequently yield unintended adverse consequences, such as poor continuity of care, which results from the expectation that care recipients should "follow" providers, rather than for care providers to "follow" recipients.

Health care in the 21st century is networked. Flexible configurations of people, places and technologies advance the course of health. While these configurations may change with different underlying conditions, for most Canadians one constant in the ever-evolving process of seeking and receiving health care is the home. Home is the point of reference from which other health care settings are assessed and home is the place where Canadians receive the bulk of their care. Indeed, the home is the health care hub.

By viewing the home and the health care services received therein as a complement to care sought, delivered and received in other settings, a more powerful method of visioning health care for the 21st century may be gleaned. Rather than developing yet another geographically separate and organizationally distinct, "silo" funding program, a concerted effort is needed to provide incentives to the provinces, health service organizations and providers to integrate service provision across the networks of care.

As discussed in Section 2.0, there are two distinct groups of home care recipients. While the recommendation for a National Home Care Program is one option to contemplate, a much more exciting opportunity is presented by the argument that it is the *care recipient* and his/her necessary health care needs, irrespective of the setting in which care is sought, delivered or received, that needs to be funded. Accordingly, post-acute home care would be integrated within the hospital-funding envelope, and continuing care would be integrated within primary care. Such funding and organizational changes may offer opportunities for enhanced service effectiveness and efficiency, and should be coupled with on going monitoring activities to ensure the advancement of various equity objectives.

4.0 Financing, Organizing and Delivering Post-Acute Home Care

Mechanisms for the financing, delivery and organization of home care following hospitalization (post-acute home care) will be outlined in this Section. Emphasis will be placed on those mechanisms that constrain the liability exposure of government, that support health service integration, and that enhance the efficient, effective and equitable allocation and use of health care services.

This Section is predicated on the belief that there is a need to extend the spirit of the *Canada Health Act*, in a staged manner, to services that were previously provided exclusively within a hospital setting, but are now available to Canadians where they reside.

This brief focuses on the financing, organizing, and delivery of *post-acute home care*, although a range of other types of home care services are currently available. Presenting post-acute home care as the first stage in the development of a National Home Care Program is useful because it will extend the reach of the *Canada Health Act*, and improve the *Act's* relevance to contemporary health care. Moreover, an emphasis on post-acute home care helps in the determination of eligibility for home care, and assists in the development of criteria for service

planning. Identification of post-acute home care advances the principle of service integration, as communication between hospital and in-home service providers is essential to advance the effective, efficient and equitable allocation and use of health care services.

Definition of Post-Acute Home Care:
As this brief is concerned with episodes of necessary health care that extend the spirit of the *Canada Health Act* to settings and providers beyond those privileged by the *Act*, reference to post-acute home care will be based on episodes of home care that may be linked to an associated episode of hospital care. The challenge faced lies in the identification and classification of episodes of home care following hospital care, and their linkage to an initial episode of hospital care, whether inpatient or same day surgery.

Post-Acute Home Care Recipients:

When does Post-Acute Home Care (PAHC) servicing start?

Fortunately, studies have explored the definition of post-acute home care (PAHC) in the context of health service restructuring.[20-22] Post-acute home care recipients have been defined as individuals who received their first home care visit within thirty days of their inpatient or same day hospital discharge date, as the initiation of home care beyond thirty days of discharge is unlikely to be directly related to their hospitalization.[7,20-23] A shorter interval than thirty days might exclude episodes of home care that were related to the hospitalization, but were postponed because of scheduling or other difficulties.

Recommendation 1: Post-acute home care recipients should be defined as individuals who received their first home care visit within thirty days of their inpatient or same day hospital discharge date.

Post-Acute Home Care Services:

When Does PAHC Servicing End?

While consensus appears to have been reached on the definition of PAHC recipients, the classification of home care services attributable to the original hospitalization is more problematic. Frequently, the solution has been to impose an arbitrary date beyond which further in-home servicing may be presumed to be unrelated to the original reason(s) for hospitalization. In some instances this censoring date may be a year after discharge[20-22] and in other cases it is at sixty days. One rationale for use of the sixty day window is that it is consistent with a short stay (or short term) classification of home care recipients, while episodes of home care that extend beyond sixty days are classified as long stay (or continuing care) episodes.

While the introduction of a sixty day window might appropriately reflect the provision of PAHC, consideration of the duration of home care following hospital care suggests that the majority of PAHC recipients are discharged from home care before thirty days of home care have elapsed. Moreover, almost 70 percent of PAHC recipients are discharged before sixty days, and only 12.7 percent have an episode of PAHC that extends beyond six months. Consequently, the duration of the episode of PAHC is likely to have only a marginal impact on the total cost of PAHC.

Which PAHC Services to Include?

Besides demarcation of the start and the end of a PAHC episode, the classification of home care services that are specific to the original episode of hospital care warrants consideration. To date, analysts have ignored this issue and have included all home care services received between the first visit after discharge and the censoring date, whether sixty days or one year after discharge.[20-22] However, to be confident that such services are related to the original episode of hospital care, rather than the continuation of services received prior to hospitalization, the service profile of each home care recipient both pre- and post-hospitalization warrants consideration.

The binary classification of home care services into PAHC and non-PAHC services following hospitalization is likely to be both administratively burdensome and clinically imprecise. However, consideration of the use of home care services by those who *did not received home care prior to hospitalization* ensures that their use of PAHC services is purged of any continuing care services. Use of these PAHC services as an estimate of PAHC services for all PAHC recipients may represent an overestimate of such care as some of these services may still be unrelated to the original hospitalization. While acknowledging this potential to overestimate PAHC services, analysts may use differing censoring dates for the PAHC episode in order to compensate for this potential overestimate.

Recommendation 2: An episode of PAHC should be defined as 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 up to one year following hospital discharge, for those without use of home care prior to hospitalization.

Classification of Linked Episodes of Hospital and Post-Acute Home Care:

The methods described earlier in this Section may be used to derive aggregate estimates of the use of PAHC. However, such estimates are not be applicable to any specific group of home care recipients and introduce uncertainty for health planners and health service organizations if their caseload were to deviate from that used to compute the aggregate estimates. Therefore, to ensure that there exists the potential to case-mix adjust PAHC, a classification scheme is required to identify linked episodes of hospital and PAHC.

Fortunately, studies have explored the classification of linked episodes of hospital care and PAHC.[20-23] Based on the work performed for the Health Services Restructuring Commission in Ontario,[20-22] each inpatient and same day surgery hospitalization could be assigned to one of twenty-five mutually exclusive and exhaustive Major Clinical Categories (MCCs) in the case of inpatient care and one of six Day Procedure Groups (DPGs) in the case of same day surgery.[24,25] The classification of inpatients into MCCs would be based on the diagnostic information contained in the discharge abstract. Such diagnostic information pertains to the most responsible diagnosis, and thereby, refers to the diagnosis that accounts for the greatest portion of the inpatient stay and corresponds to specific body systems. Similarly, classifications of same day surgery events into DPGs would be based on specific procedure codes associated with each episode of hospital care. While MCCs and DPGs are not as specific as Case Mix Group™ (registered trademark of the Canadian Institute for Health Information) categories,[26] they enable the derivation of stable PAHC utilization rates. (Efforts in the U.S. to link episodes of hospital care to PAHC have used Diagnostic Related Groups (DRGs).[23])

The existence of methods to classify episodes of hospital case and to link such episodes to PAHC provides the means to operationalize a National Home Care Program that might be introduced in a phased manner with supports that yield service integration. However, the use of any classification scheme is not without its limitations. First, in the context of MCCs and DPGs, the use of diagnostic information and specific procedure codes to classify PAHC recipients may be useful in the classification of the hospital episode, but may be a poor marker of service utilization following discharge. Thus, while the classification system may yield homogeneous grouping of episodes of hospital care, the groupings of PAHC may be more heterogeneous.

Second, while the classification schemes, MCCs and DPGs, emphasize the clinical dimensions of hospital care, the social dimensions of the post-acute home care and the clinical dimensions of care in the community are not included in the classification scheme. Consequently, the validity of using a hospital specific classification scheme for application to post-acute home care warrants further inquiry.

Recommendation 3: Clinical groupings for PAHC recipients should be sufficiently small that they enable the derivation of stable utilization rates for PAHC. Use of Major Clinical Categories (MCCs) and Day Procedure Groups (DPGs) satisfy these criteria.

Propensity and Intensity of Post-Acute Home Care:
While this Section has described methods to link episodes of hospital care to PAHC, and has described mechanisms that may be used to identify PAHC recipients and associated services, operational details in the computation of access to PAHC services for each class of home care recipient has not been developed. In this sub-section, access to PAHC services is characterized in terms of two dimensions: first, the propensity to use home care, that refers to population-based rates of home care utilization following hospital discharge, and second, once home care is assured, the intensity (or the amount) of home care services received.

Propensity to Use PAHC:
Based on the work performed for the Health Services Restructuring Commission in Ontario,[20-22] methods have been developed to derive the propensity to use PAHC for inpatient and same day surgery (SDS) hospitalizations by age, sex, and by various clinical groupings. PAHC recipients were defined as individuals who received their first home care visit within thirty days of their inpatient or same day hospital discharge date, and Table 1 reports the age- and sex-specific rates of PAHC use in Ontario for inpatient and SDS hospitalizations over a three year period. There were 2,870,695 inpatient hospitalizations and 1,803,307 SDS hospitalizations; the number of inpatient and SDS hospitalizations that were followed by PAHC was 359,972 and 64,541, respectively. The rate of PAHC use per 100 hospitalizations was 12.6 for inpatients and 3.6 for SDS. These figures imply that almost 13 percent of inpatient hospitalizations and almost 4 percent of SDS hospitalizations were followed with an episode of post-acute home care.

Individuals under sixty-five years accounted for seventy-five percent of all inpatient and SDS hospitalizations, and approximately forty-five percent of all episodes of PAHC. PAHC rates increase with age and were higher for women over forty-five than for men. Across MCCs and DPGs there were wide variations in PAHC rates. Specifically, four MCCs, associated with forty

percent of all inpatient hospitalizations, accounted for half of all inpatient hospitalizations that were followed by home care: respiratory (MCC04), circulatory (MCC05), digestive (MCC06), and musculoskeletal (MCC08). Similarly, in the case of SDS hospitalizations, three DPGs, associated with forty percent of all SDS hospitalizations, accounted for almost half of all SDS home care clients: lens procedures (DPG05), gastrointestinal procedures (DPG28), and bladder and urethral procedures (DPG35).

Intensity of PAHC Use:

Once access to PAHC is assured, home care recipients may vary in the intensity (or amount) of care they received. One method that has been used to assess the intensity of PAHC has been to estimate the mean cost of an episode of PAHC for various clinical groupings.[20-22] Estimates of the mean costs of an episode of PAHC are based on the number of distinct home care services received (nursing, therapy, personal support, etc) from the first service date, if within thirty days of hospital discharge, to one year following hospital discharge (or the date when care recipients were discharged from home care, whichever came first) and the unit cost of such services. Estimates of the unit cost of the home care services provided to home care recipients were based on the rates paid by the Metropolitan Toronto Home Care Program to home care providers in 1995, and inflated to account for the growth in home care funding.

The estimated mean costs (in 2002 dollars) for episodes of PAHC for each MCC and each DPG are reported in Tables 2 and 3, respectively. Patient-specific case management costs, travel time costs and the cost of equipment and supplies are not included in the home care claims data, but have been estimated to amount to approximately twenty-one percent of total home care spending.[27] Thus, the mean cost for an episode of PAHC reported in Tables 2 and 3 would need to be increased by twenty-one percent to capture all home care costs with PAHC.

Estimates of the mean cost of an episode of PAHC, as derived in Tables 2 and 3, are historical estimates, reflective of past performance, and may therefore represent an inaccurate estimate of future care recipient costs, especially in a period of significant restructuring. Specifically, restructuring may alter the threshold at which individuals are admitted to hospital, it may modify the criteria for discharge, and it may alter options with respect to post-acute care available in other health care settings. Consequently, caution is needed before advocating for the use of particular estimates of an episode of PAHC, especially when the underlying needs of care recipients are undergoing significant change, either because of their increased functional or daily living needs. Moreover, service intensity may be increased because of greater service monitoring, the educational needs of care recipients, and improvements to the responsiveness of home care services. These increases in service intensity may increase the cost of an episode of PAHC and should be captured in home care financing arrangements.

Estimates of the cost of an episode of PAHC were sensitive to the measure of central tendency used.[20-22] While estimates based on the mean were approximately twice those based on the median, the median is the measure of choice to capture the home care cost for a typical client recently discharged from hospital. However, the mean cost of an episode of care captures the financial liability of home care providers to service care recipients. As such, estimates of the mean cost of PAHC should be used to develop financing estimates for a National Post-Acute Home Care Program.

Recommendation 4: Estimates of the mean cost of PAHC should be used to develop financing estimates for a National Post-Acute Home Care Program.

Organizational Arrangements for PAHC:
The product between the propensity to use PAHC and the associated intensity of PAHC care, estimated through use of the mean costs of an episode of care, provides an estimate of the expected cost of PAHC for each hospital admission that falls into each specific clinical grouping. If such estimates were further multiplied by the anticipated number of inpatient and same day surgery hospitalisations the total expected cost of PAHC would be derived.

While the national estimates of the total cost of PAHC will be derived in Section 5.0, the manner in which such funds are allocated and the mechanisms used to assign responsibility for the organization and delivery of such care is tremendously important in advancing various policy goals: limiting the liability exposure of various levels of government; supporting service integration; and enhancing the efficient, effective and equitable allocation and use of health care services. In this sub-section, mechanisms for the finance, organization and delivery of PAHC are outlined. Control and responsibility for the organization and delivery of PAHC varies across Canada, but is frequently assigned to organizations that are distinct from hospitals. This bifurcation of entrenched interests between organizations responsible for hospital care and those responsible for home care, restricts opportunities for service integration, stifles innovation and limits service cost-effectiveness.

While one financing option for PAHC is to continue to fund organizations charged with the distinct responsibility to negotiate, select, approve, and evaluate (internal or external) contractual arrangements with home care providers, this financing option is misdirected. It does not address the fundamental need for service integration.

The contemporary landscape of health care is one in which coalitions of people, places, and technologies are configured to suit the individualized needs of care recipients. However, such health care coalitions are achieved despite, not because of, the contemporary institutions of health care. The development of another separate program, another set of vested interests, would do little to further the interests of Canadians who desire the formation of individualized configurations of health care services and settings. Consequently, if fundamental health reforms are to occur, financing has to follow the care recipient, and in the case of PAHC this implies that financing should be first directed to hospitals.

Recommendation 5: Financing for PAHC should be first directed to hospitals, but the PAHC envelope should be monitored on a regular basis to ensure the appropriate provision of such care.

There is an abundance of evidence to indicate that hospitals respond in predictable ways to financial incentives. The introduction of rate-based reimbursement, whereby hospitals are reimbursed a fixed (or capitated) amount for each admission, hereafter referred to as "rate-based" reimbursement, provides incentives to shorten lengths of stay and to shift the hospital caseload towards day surgery and away from inpatient care. Furthermore, given the relationship between PAHC and hospital care, the introduction of rate-based reimbursement for hospitals would increase their demand for

PAHC.[23,28] Whether there is an increase in the take-up of home care depends on the manner in which such care is financed, delivered and organized.

If hospitals were financed for the provision of PAHC, the externalities, in this case potential cost-savings, associated with shorter lengths of stay and greater use of PAHC may be internalised, thereby encouraging the uptake of home care.[23] In contrast, if a separate organization were financed for the provision of in-home care, the potential cost-savings achieved through either shorter hospital stays or the use of day surgery would not be captured, and hence, would not have a direct impact on the servicing decisions. Consequently, efficiency gains in the provision of both hospital care and PAHC are advanced through the vertical integration of these services and their joint finance.

Recommendation 6: To encourage innovation and service integration, and to enhance the efficient and effective provision of necessary health care irrespective of the setting in which such care is received, a rate-based method of reimbursement for PAHC should be developed in conjunction with rate-based arrangements for each episode of hospital care.

Several authors have advocated for the assessment of hospital rate-based reimbursement that includes a component for PAHC.[29,30] These advocates suggest that efficiency and effectiveness gains would be made if hospitals were to received a bundled fee and were responsible for all aspects of acute care, regardless of the care setting (hospital or home).

Notwithstanding the potential efficiency gains, authors have highlighted the interrelationships between the availability of institutional long-term care (LTC) and the use of home care following hospital discharge.[23] Due to these linkages it is difficult to fully distinguish PAHC from care following hospitalisation received for other purposes. Thus, the use of a bundled fee for hospitals may result in inequities in hospital reimbursement. Specifically, regions with a significant shortage of LTC beds are also regions with a higher uptake of home care following hospitalisation.[23,28,31,32] As such, the bundled fee for hospital and home care may be used to finance both PAHC as well as continuing care. Moreover, hospitals located in regions with a shortage of LTC beds would be under financed for the provision of home care following hospitalization because their current rate of utilization is greater than the average. Consequently, the introduction of a bundled fee may result in a relative expansion of home care following hospitalisation in regions that already have an enhanced supply of LTC beds and smaller increase in those regions that have a shortage of such beds.

Recognition that the recipients of home care following hospitalisation extend beyond just PAHC recipients, the restriction of home care to only nursing and therapy services would distort patterns of practice. Specifically, while the provision of personal support might be the cost-effective solution to ensure early discharge, reimbursement circumstances might result in the provision of nursing care to achieve the same objective. Consequently, if the terms and conditions of reimbursement for the provision of home care following hospital care were restrictive, the behavioural response by hospitals might raise, not lower, the cost of care. As a result, the reimbursement arrangements for the provision of home care following hospital care should be flexible in order to encourage innovation and efficiency.

Recommendation 7: Do not restrict the range of services, products and technologies that may be used to facilitate the use of home care following hospital care.

Who Provides PAHC?

While a bundled fee payable to hospitals that includes an actuarially fair estimate of the mean cost of PAHC for each appropriate clinical grouping is advocated in this brief, the methods by which PAHC is organized and delivered may take on many different forms. In some circumstances, hospitals may provide such services themselves, in other situations hospitals may contract with home care services providers, while in other circumstances hospitals may contract with third party transfer agencies that further contract with home care service providers.

The range of organizational options for PAHC is immense. First, the establishment of separate third party home care transfer agencies may raise the potential for prohibitive contracting and other administrative costs, but may also present some regionally distinct hospitals with an opportunity to pool resources and to gain economies of scale in service provision. Second, while the provision of PAHC by hospital staff unfamiliar with the unique community-based circumstances faced by care recipients may limit the customisation of such care, hospitals may develop dedicated in-home service teams to address such concerns. Finally, hospitals may contract-out (or out-source) the provision of PAHC to home care service providers. This arrangement has the advantage of service specialization by providers familiar with the circumstances in the community, it offers the prospect of service integration between hospital and PAHC, it yields opportunities to internalise externalities associated with improvements in patterns of care, and it presents service monitoring arrangements that may be used in the assignment of service contracts.

Recommendation 8: Provide out-sourcing opportunities to hospitals so that they have the option to develop contractual relationships directly with home care service providers or with transfer agencies that may provide case management and service provision arrangements.

Regardless of the organizational arrangement selected for the provision of PAHC, the providers of PAHC should receive rate-based reimbursement. This scheme ensures that the PAHC service providers receive a flat or capitated rate, thereby advancing the goal of limiting the liability exposure of government (and hospitals). It also supports service innovation and integration, and enhances the efficient and effective allocation of health care services.

Reimbursing home care service providers a fixed, predetermined, payment offers incentives that deviate from the current fee-for-service arrangement. First, providers may retain residual income and would therefore have incentives to select more efficient ways of delivering services. Second, to take advantage of economies of scale and scope, both vertical and horizontal service integration may occur. Such integrated organizations may be in a better position than other organizations to cost-effectively task delegate and to improve the continuity of care. Third, to the extent to which the capitation payment exceeds the costs incurred in service provision, incentives exist for such organizations to compete for additional care recipients.[33,34] However, as a forth incentive, this reimbursement scheme encourages the avoidance of care recipients with high service needs. In the absence of a vigilant program of evaluation, incentives are present for organizations to skimp on service provision.[34] Consequently, the determination of an appropriate risk-adjusted rate-based payment that closely reflects the service needs of PAHC recipients and the introduction of a systematic program of outcome performance are policies that need to be developed in concert with modified funding schemes to ensure cost-effective and accessible PAHC.

Recommendation 9: If contracts were formed with home care service providers, these contracts should include, in addition to rate-based reimbursement arrangements, mechanisms to monitor service quality and performance.

Who Pays for PAHC?

Although this brief has described proposals for the financing, organization and delivery of PAHC, the role of care recipients has not yet been addressed. The Senate Committee requested consideration of income dependent deductible and co-insurance arrangements for PAHC. While such arrangements may be proposed, reasonable access by all residents to the full range of insured services without financial impediments to utilization captures the essence of the current federal funding criteria for services encompassed by the *Canada Health Act*.[35,36] Consequently, the introduction of user fees or other such financial barriers to utilization would erode the principle of accessibility currently safeguarded under the *Act*.

Current debate concerning the financial sustainability of health care has raised questions about whether governments can afford to finance such health care in the manner to which it has become accustomed.[37,38] These pressures on various levels of government have been the catalyst to constrain the liability exposure of government. These pressures are expected to grow as more care shifts towards settings that are not currently covered under the principles of the *Canada Health Act*. Whether these financial demands are satisfied through general taxation, direct payments or a special health levy (akin to the *Employer Health Tax* used in Ontario) is somewhat immaterial to the achievement of the financial goals, but has significant impact on distributional considerations.

The income tax system provides a possible mechanism for raising such revenue to cover the cost of PAHC as it is associated with lower administration costs (compared to other schemes) and is perceived to be more equitable than other forms of taxation. Such a scheme might entail a basic level of PAHC coverage for all Canadians, with utilization above that threshold and up to some ceiling that may be age, sex, and health condition dependant, defined as a taxable benefit.[39-41] This additional source of taxation revenue assists in the financing of a national program for PAHC and helps to broaden the principle of comprehensiveness, albeit with an erosion in the principle of accessibility.

Other arrangements, such as deductibles and co-insurance arrangements that may be assessed against a care recipient's or household's income are blunt instruments to limit the government's liability exposure for PAHC. Each scheme is based on the assumption that if care recipients were offered appropriate financial incentives then "over-utilization" of such services would be avoided. While care recipients may respond to PAHC user fees by reducing their utilization, decisions pertaining to service eligibility and service planning are determined in conjunction with a case manager. Consequently, the role of the care recipient in such decision-making is limited.

The introduction of user fees for PAHC may limit the efficient and effective use of various health care settings and inhibit the advancement of service integration. Potential home care recipients confronted with the prospect of early discharge with fees for PAHC and an extended stay in hospital with first dollar coverage have incentives to resist early discharge. Thus, user fees for PAHC may yield unintended adverse consequences that limit service integration and cost-effectiveness.

Recognizing the administrative costs associated with the imposition of user fees for necessary health care, limited revenue potential, problematic incentives on utilization, and the potential inequities and hardships introduced, first dollar public health insurance coverage for PAHC should be pursued vigorously. Indeed, as argued throughout this brief, the principle of comprehensiveness currently embedded in the *Canada Health Act* needs to be expanded, as the setting for care delivery should be irrelevant to whether necessary health care is publicly funded. Moreover, the terms and conditions of such insurance should likewise be similar wherever necessary health care is sought, delivered or received.

Recommendation 10: First dollar public health insurance coverage for PAHC should be pursued vigorously and in conformity with the terms and conditions for insurance received for other necessary health care.

5.0 The Cost of a National Post-Acute Home Care Program

In order to expand the principle of comprehensiveness embedded in the *Canada Health Act* to services received at home following an episode of hospital care, expenditure estimates are required. Any estimate is fraught with a series of underlying assumptions that may prove to be untenable in various circumstances. While rough estimates of the cost of a National PAHC Program are developed in this Section in order to inform the policy decision-making process, a distinction should be made between the funding required for PAHC and the mechanisms to be used to organize and deliver such care. These distinctions are useful in order to enhance innovation, service integration, and the efficient and effective provision of necessary health care.

As shown in Figure 3, there are wide inter-provincial variations in per capita public home care expenditures in Canada that persist even after adjusting for variations in the age-sex composition of the underlying population. While public per capita funding for home care in fiscal year 2000 was $87.51, there was a four-fold variation in such expenditures between New Brunswick ($193.76) and both Prince Edward Island ($47.85) and Quebec ($51.89).[4] The federal government has an important role to highlight such variation in funding levels for home care, and may assist in rectifying such variation to ensure that all Canadians, irrespective of where they reside, have reasonable access to equivalent funding for home care.

Nationally, public home care expenditures were $2,690.9 million in fiscal year 2000.[4] To identify the component of such expenditures that were associated with PAHC, methods based on previous work in Ontario for the Health Services Restructuring Commission were used.[20-22] All home care recipients were identified for fiscal year 1997. These home care recipients were assigned to one of four mutually exhaustive and exclusive categories, as shown in Figure 4, based on their use of home care in relations to any episode of hospital care. Home care recipients were first classified according to whether they had an episode of hospital care, whether inpatient or same-day surgery, during fiscal year 1997. If they had an episode of hospital care, the provision of home care within thirty days of discharge was assessed. If the first home care visit following hospital discharge took place within thirty days, the use of home care services in the thirty days prior to hospitalization was assessed. Accordingly, the four home care recipient categories were: no hospitalization; no PAHC; PAHC without prior home care; and PAHC with prior home care.

Use of home care services and the mean cost of such services were assessed for one year following either the first home care service date (for recipients who did not receive PAHC) or the first home care service date following hospital discharge (for recipients who received PAHC).

Two estimates are offered for the proportion of total home care costs attributable to PAHC. The first (and high) estimate was based on the proportion of home care recipients that received PAHC, while the second (and low) estimate was based on the proportion of *expenditures* attributable to such care. While 42.8 percent of home care recipients received PAHC services, only 26.5 percent of total home care expenditures were attributable to such care. Consequently, use of both low (26.5 percent) and high (42.8 percent) estimates for the cost of a National PAHC Program recognizes the uncertainty associated with developing cost estimates.

What About Hidden Costs?

In addition to home care service costs, there are other costs associated with the provision of PAHC that are hidden in other provincial spending categories. Drug costs are one major hidden cost component. For fiscal year 2001, the Ontario Drug Benefit (ODB) program expenditure attributable to home care recipients was estimated to be $86.8 million.[42] These estimates were associated with persons who were either otherwise ineligible for provincial drug benefit coverage or changed their provincial drug benefit status for financial reasons. While these estimates reflect an underestimate of provincial drug program liabilities associated with the provision of home care, they may be used to estimate the hidden costs associated with the provision of PAHC.

Suppose the identified ODB program expenditures attributable to home care only represents the hidden costs incurred by those under sixty-five years of age during their home care episode. Under this assumption, estimates of the hidden costs associated with an episode of home care are $627.97 (in 2001 dollars). Since these costs are assumed to be uniform across all categories of home care recipients, they may be used to compute a "hidden cost" inflation factor for PAHC. This inflation factor may be defined as one plus the ratio of the hidden costs ($627.97) to the cost per PAHC recipient. The latter depends on the home care costs attributable to PAHC recipients divided by the number of such recipients (137,915 from Figure 4). Using figures from Ontario, in conjunction with the high estimate for PAHC costs, the hidden cost inflation factor is (1.1731), while this factor is (1.2796) when using the low estimate for PAHC costs.

How Much Will a National PAHC Program Cost?

Combining estimates of the hidden costs with those for the direct service costs and converting to 2002 dollars, using the growth in home care funding in Ontario between fiscal years 2000 and 2002 of 11.9 percent, yields estimates for a National PAHC Program. These estimates range from $1,021.1 million and $1,511.8 million for fiscal year 2002. The low estimate was calculated as $2,690.9 million * 1.119 * 0.265 * 1.2796, while the high estimate was derived as $2,690.9 million * 1.119 * 0.428 * 1.1731. If the federal government were to cost-share these expenditures with the provinces on a 50:50 basis, the total cost (in fiscal year 2002 dollars) borne by the federal government associated with a National PAHC Program would range from $510.6 million to $755.9 million.

6.0 Conclusion and Recommendations

Canadian health care in the 21st century is more than a collection of discrete health care settings, people and technologies. Rather the new health care order is networked, with configurations of people, places, and technologies that are in a perpetual state of evolution in order to address the health care needs of Canadians over their life course. The main purpose of this brief was to outline a series of financing, delivery and organizational mechanisms that extend the spirit of the *Canada Health Act* to health services and technologies that were previously provided within a hospital setting, but are now available to Canadians where they reside. To achieve this goal, three principles were invoked to guide the reform process: first, reforms should be introduced in a phased manner with supports that further service integration; second, the comprehensiveness principle captured in the *Canada Health Act* should be broadened to include necessary health care wherever that care is sought, delivered and received; and finally, mechanisms that constrain government liabilities should be included in any health reform package.

While this brief focused on PAHC and developed estimates of the cost of a National PAHC Program, the establishment of a geographically separate and organizationally distinct funding program for PAHC is *not* recommended. Indeed, a separate parallel National PAHC Program may inhibit service integration across networks of care and may limit opportunities to enhance the efficient, effective and equitable allocation and use of health care services.

The following recommendations are aimed to enhance service integration and ensure that Canadians have necessary health care, irrespective of where such care is sought, delivered or received:

Recommendation 1: Post-acute home care recipients should be defined as individuals who received their first home care visit within thirty days of their inpatient or same day hospital discharge date.

Recommendation 2: An episode of PAHC should be defined as 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 up to one year following hospital discharge, for those without use of home care prior to hospitalization.

Recommendation 3: Clinical groupings for PAHC recipients should be sufficiently small that they enable the derivation of stable utilization rates for PAHC. Use of Major Clinical Categories (MCCs) and Day Procedure Groups (DPGs) satisfy these criteria.

Recommendation 4: Estimates of the mean cost of PAHC should be used to develop financing estimates for a National Post-Acute Home Care Program.

Recommendation 5: Financing for PAHC should be first directed to hospitals, but the PAHC envelope should be monitored on a regular basis to ensure the appropriate provision of such care.

Recommendation 6: To encourage innovation and service integration, and to enhance the efficient and effective provision of necessary health care irrespective of the setting in which such care is received, a rate-based method of reimbursement for PAHC should be developed in conjunction with rate-based arrangements for each episode of hospital care.

Recommendation 7: Do not restrict the range of services, products and technologies that may be used to facilitate the use of home care following hospital care.

Recommendation 8: Provide out-sourcing opportunities to hospitals so that they have the option to develop contractual relationships directly with home care service providers or with transfer agencies that may provide case management and service provision arrangements.

Recommendation 9: If contracts were formed with home care service providers, these contracts should include, in addition to rate-based reimbursement arrangements, mechanisms to monitor service quality and performance.

Recommendation 10: First dollar public health insurance coverage for PAHC should be pursued vigorously and in conformity with the terms and conditions for insurance received for other necessary health care.

References

1. Coyte PC, McKeever P: Home care in Canada: Passing the buck. Canadian Journal of Nursing Research, 33:2, 11-25, 2001.
2. Coyte PC, McKeever P: Submission to the Standing Senate Committee on Social Affairs, Science and Technology: Study on the State of the Health Care System of Canada. The Kirby Committee. October, 2001.
3. McKeever P, Coyte PC: Here, there and everywhere. University of Toronto Bulletin, A16, March 25, 2002.
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. Keating, N., et al: Eldercare in Canada: Context, content and consequences. Catalogue #89-570-XPE. Ottawa: Statistics Canada, November, 1999.
6. Jackson RA: Home care: The cornerstone of health renewal in Nova Scotia. Leadership in Health Services, 4: 5-14, 1994.
7. Hollander M: The costs, and cost-effectiveness of continuing care services in Canada. Queen's-University of Ottawa Economic Projects Ottawa,1-113, 1994.
8. Jacobs P, Hall E, Henderson I, Nichols D: Episodic acute care costs: Linking inpatient and home care. Canadian Journal of Public Health, 86: 200-205, 1995.
9. Saskatchewan Health Services Utilization and Research Commission: Hospital and home care study. Saskatoon, Saskatchewan Health Services Utilization and Research Commission, Report No. 10, 1998.
10. Hollander MJ: Substudy 1: Comparative analysis of home care and residential care services: Preliminary findings. National Evaluation of the Cost-Effectiveness of Home Care, Centre on Aging, University of Victoria, November, 1999.
11. Parr K: The cost effectiveness of home care: A literature review. Health Services Utilization and Research Commission, Saskatoon, Saskatchewan, March, 1996.
12. Price Waterhouse: Operational Review of the Ontario Home Care Program, Final Report, Toronto, 1989.
13. Federal/Provincial/Territorial Working Group on Home Care: A Working Group of the Federal/Provincial/Territorial Subcommittee on Long Term Care. Report on Home Care. Health Services Promotion Branch, Health and Welfare Canada, Ottawa, 1990.
14. Weissert W, Wan T, Livieratos BB, Pellegrino J: Effects and costs of day-care services for the chronically ill. Medical Care, 28:6, 567-584, 1980;
15. Weissert W: Seven reasons why it is so difficult to make community-based long-term care cost-effective. Health Services Research, 20:4, 423-433, 1985.
16. Weissert WG: A new policy agenda for home care. Health Affairs, 10:2, 67-77, 1991.
17. Weissert WG, Cready CM: Toward a model for improved targeting of aged at risk of institutionalization. Health Services Research, 24:4, 485-510, 1989.
18. PriceWaterhouseCoopers: Health insider: An indepth research report on consumer health issues. Toronto, 1999.
19. Laporte A, Croxford R, Coyte PC: Access to home care services The role of socio-economic status. Presentation at the Canadian Health Economics Research Association Conference, Halifax, May 2002.
20. Coyte PC, Young W: Regional variations in the use of home care services in Ontario, 1993/1995. Canadian Medical Association Journal, 161:4, 376-380, 1999.

21. Coyte PC, Young W: Reinvestment in and use of home care services, Technical Report No. 97-05-TR, Institute for Clinical Evaluative Studies: Toronto, Ontario, November, 1997.
22. Coyte PC, Young W, DeBoer D: Home care report for the Health Services Restructuring Commission. Report to the Health Services Restructuring Commission, Health Services Restructuring Commission: Toronto, 1997.
23. Kenney GM: How access to long-term care affects home health transfers. Journal of Health Politics Policy and Law, 83: 412-414, 1993.
24. Canadian Institute for Health Information: Length of stay database by CMG. Ottawa. Canadian Institute for Health Information, 1994.
25. Canadian Institute for Health Information: DPG booklet. Ottawa. Canadian Institute for Health Informatio. 1996.
26. Pink GH, Bolley HB: Case mix groups and resource intensity weights: An overview for physicians. Canadian Medical Association Journal,150:6, 889-894, 1994.
27. Health Services Restructuring Commission: Rebuilding Ontario's health system: Interim planning guidelines and implementation strategies. Health Services Restructuring Commission: Toronto. July, 1997.
28. Kenney GM: Understanding the effects of PPS on Medicare home health use. Inquiry, 28: 129-139, 1991.
29. Neu CR et al: Extending the Medicare prospective payment system to posthospital care: Planning a demonstration. R-3335-HCFA, Santa Monica, Rand Corp., 1986.
30. Morrisey MA, Sloan F, Valvona J: Shifting Medicare patients out of hospital. Health Affairs, 7:5, 52-64, 1988.
31. Kenney GM: Is access to home health care a problem in rural areas? American Journal of Public Health, 83:3, 412-414, 1993.
32. Kenney GM, Dubay LC: Explaining area variation in the use of Medicare home health services. Medical Care, 30:1, 43-57, 1992.
33. Valdeck BC, Miller NA: The Medicare home health initiative. Health Care Financing Review, 16:1, 7 – 16, 1994.
34. Phillips BR, Brown RS, Bishop CE, et al: Do preset per visit payments affect home health agency behaviour? Health Care Financing Review, 16:1, 91- 107, 1994.
35. Vayda E, Deber RB: The Canadian health care system: An overview. Social Science and Medicine, 3: 191-197, 1984.
36. Evans RG, Lomas J, Barer ML et al: Controlling health expenditures: The Canadian reality. New England Journal of Medicine, 320:9, 571-577, 1989
37. Canadian Medical Association: Towards a new consensus on health financing in Canada. Policy Position Paper, Working Group on Health System Financing in Canada, July, 1993.
38. Canadian Medical Association: Health financing in Canada: Meeting the challenges of change. Working Group on Health System Financing in Canada, May, 1994.
39. Government of Quebec: Equitable funding: Living within our means: Summary of the Discussion Paper, Ministre de la Sante et des Services Sociaux, Quebec, 1991.
40. Houghton D.: Paying for the social services. Institute of Economic Affairs: London, 1968.
41. Ontario Economic Council: Issues and alternatives, 1976: Health. Ontario Economic Council: Toronto, 1976.
42. Personal Communication, Mr. Carl Marshall, Associate Director, Administration, Finance and Eligibility, Drug Programs Branch, Ontario Ministry of Health and Long - Term Care, 2002.

Figure 1: Public Home Care Expenditures in Canada, 1980-81 to 2000-01

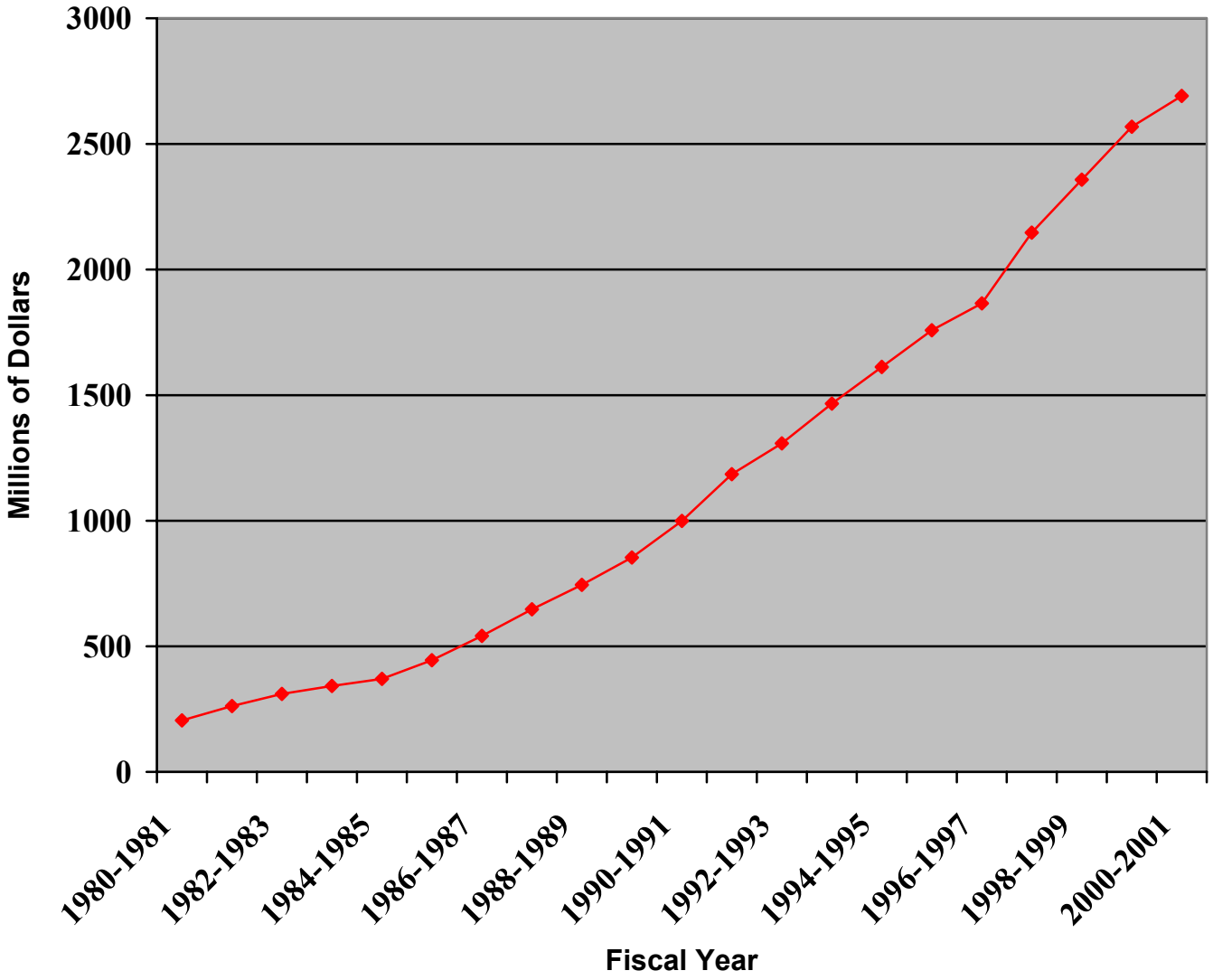

Figure 2: Private Home Care Expenditures in Canada, 1980-81 to 2000-01

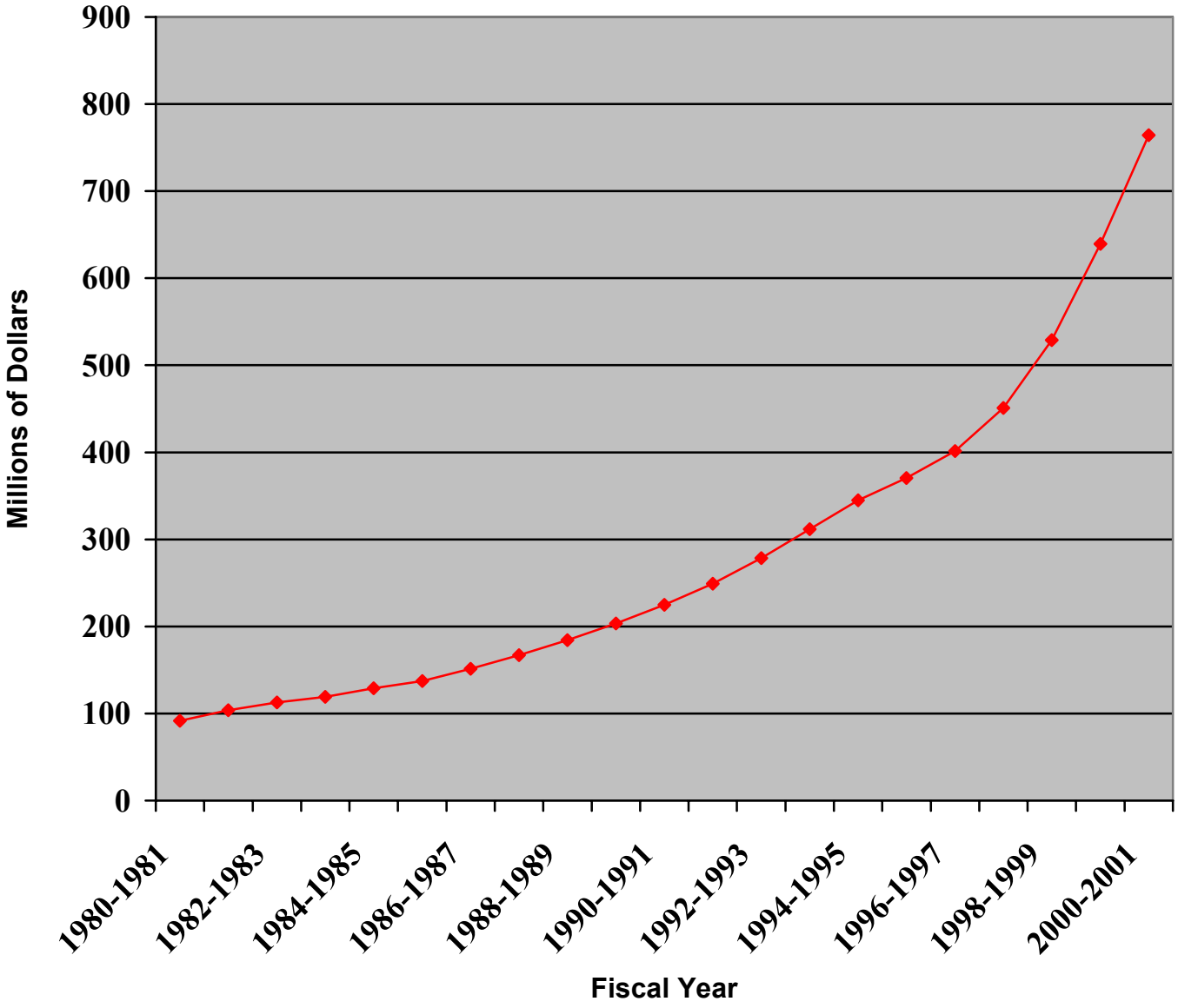

Figure 3: Per Capita Public Home Care Expenditures for Canadian Provinces and Territories, 2000-01

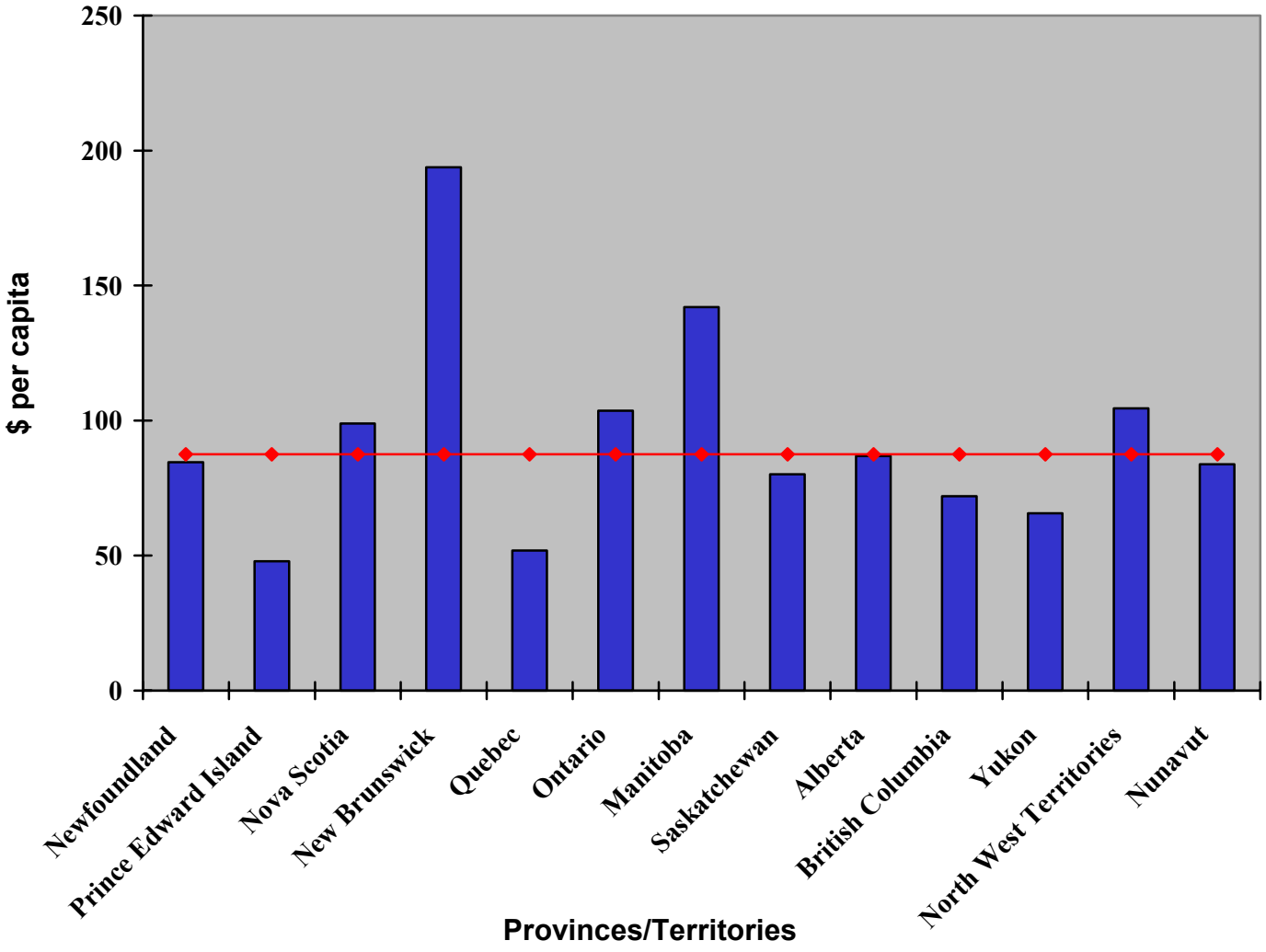

Figure 4: Home Care Recipients and Mean Expenditures (in 2002 Dollars)

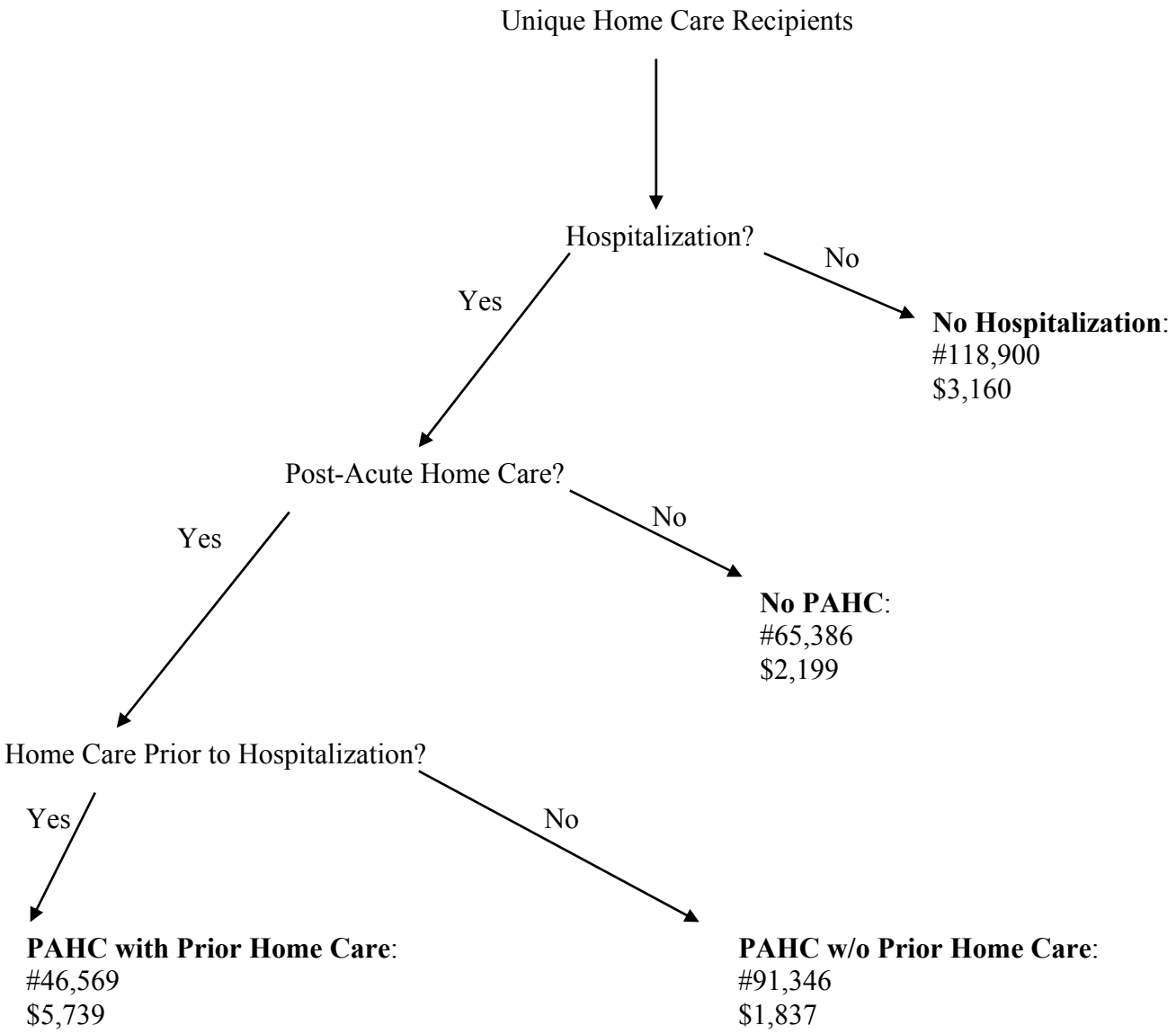

Table 1: Age/Sex-specific Rates of Post-Acute Home Care Utilization in Ontario, Fiscal Years 1993-95

		Inpatient Hospitalizations			Same – Day Surgery Hospitalizations		
Sex	Age	# Patients Received Home Care	# Inpatient Hospitalizations	Rate per 100 Hospitalizations	# Patients Received Home Care	# Same-Day Surgery Hospitalizations	Rate per 100 Hospitalizations
Female	**≤44**	50,250	1,073,733	4.7	7,774	556,192	1.4
	45-64	38,206	243,296	15.7	7,102	245,103	2.9
	65-74	47,421	166,403	28.5	7,804	124,705	6.3
	≥75	77,913	218,368	35.7	12,724	97,511	13.0
	Total	**213,790**	**1,701,800**	**12.6**	**35,404**	**1,023,511**	**3.5**
Male	**≤ 44**	32,186	590,935	5.4	8,497	354,957	2.4
	45-64	31,979	244,423	13.1	6,206	211,487	2.9
	65-74	36,961	177,200	20.9	6,465	130,916	4.9
	≥ 75	45,056	156,337	28.8	7,969	82,436	9.7
	Total	**146,182**	**1,168,895**	**12.5**	**29,137**	**779,796**	**3.7**
Total		**359,972**	**2,870,695**	**12.5**	**64,541**	**1,803,307**	**3.6**

Table 2: Mean Cost (in 2002 dollars) of an Episode of Post-Acute Home Care for Various Major Clinical Categories

MCC	Mean Cost (in 2002 dollars) of an Episode of Post-Acute Home Care
MCC01-Nervous System	$2,133.45
MCC02-Eye	$1,768.55
MCC03-Ear, Nose & Throat	$2,001.70
MCC04-Respiratory	$1,943.54
MCC05-Circulatory	$1,740.64
MCC06-Digestive	$1,795.90
MCC07-Hepatobiliary	$1,482.21
MCC08-Musculoskeletal	$1,545.76
MCC09-Skin	$1,633.78
MCC10-Endocrine	$2,001.29
MCC11-Kidney	$1,601.27
MCC12-Male Reproductive	$1,012.71
MCC13-Female Reproductive	$1,167.23
MCC14-Pregnancy	$ 446.26
MCC15-Newborns	$ 241.07
MCC16-Blood	$2,034.55
MCC17-Lymphoma	$1,850.52
MCC18-Multisystemic	$2,012.25
MCC19-Mental Disease	$2,013.32
MCC21-Injury	$1,993.10
MCC22-Burns	$1,104.13
MCC23-Other Reason	$2,297.06
MCC24-AIDS	$3,636.44
MCC25-Trauma	$1,673.15
MCC99-Ungroupable	$2,050.05

Table 3: Mean Cost (in 2002 dollars) of an Episode of Post-Acute Home Care for Various Day Procedure Groups

DPG	Mean Cost (in 2002 dollars) of an Episode of Post-Acute Home Care
DPG 05 - Lens Procedures	$ 913.77
DPG 13 - Tonsil/Adenoid Procedures	$ 93.43
DPG 28 - GI Procedures	$2,086.50
DPG 35 - Bladder and Urethral Procedures	$2,116.06
DPG 59 - Skin Procedures	$1,507.02
All Other DPGs	$1,295.80