Identifying the Assumptions Used by Various Jurisdictions to Forecast Demands for Home and Facility-Based Care for the Elderly*

December 19, 2000

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*Dr. Coyte is supported by funds from the Canadian Institute for Health Research and the Canadian Health Services Research Foundation for his Chair in Health Care Settings and Canadians. The authors have benefited from advice and commentary from an Advisory Committee whose members are listed in the Appendix. The opinions expressed are those of the authors and do not necessarily reflect the opinions of any funding agency or institution.

This report may be referenced as: Coyte PC, Laporte A, Stewart S: Identifying the Assumptions Used by Various Jurisdictions to Forecast Demands for Home and Facility-Based Care for the Elderly. Report prepared under grant 02709 from the Ministry of Health and Long-Term Care in Ontario to the University of Toronto, December, 2000.

Summary Paper

1.0 Introduction

This paper is concerned with the systematic and comprehensive development of a long-term care (LTC) planning framework to aid decision-making. The framework advanced includes both needs-based and preference-based assumptions with respect to plans for health services and health care settings. Needs-based assumptions used in this model are those factors that predispose the elderly to need health and social care. While needs-based assumptions might be thought of as factors that highlight a *potential* need for LTC, preference-based assumptions might be thought of as factors that influence the willingness of individuals to seek/accept care. Such preference-based assumptions are therefore those factors that affect the type and amount of health and social care that individuals will demand. While needs and preference-based approaches to health planning have often been viewed as competing alternatives, we contend that these approaches are highly complementary. Indeed, we suggest that a systematic and comprehensive approach to LTC planning may only be achieved if both approaches were integrated into health planning efforts. Consequently, the framework advanced herein represents a more complete approach to LTC planning than earlier efforts.

Long-term care (LTC) in Ontario reflects a range of health, social and personal care services offered across alternative care settings.[1] Formal LTC services in Ontario are facility-based, such as nursing homes and homes for the aged, and community-based, such as home nursing, homemaking and supportive housing.[2] Because the elderly are high users of health

[1] Baranek PM and Coyte PC. 1999. Long Term Care in Ontario: Home Care and Residential Care. Report prepared for the College of Physicians and Surgeons of Ontario, 1999.

[2] Baranek PM and Coyte PC. 1999. Long Term Care in Ontario: Home Care and Residential Care. Report prepared for the College of Physicians and Surgeons of Ontario, 1999, Federal-Provincial-Territorial Advisory Committee on Health Services (ACHS) Working Group on Continuing Care. (May 2000), The Identification and Analysis of Incentives and Disincentives and Cost-Effectiveness of Various Funding Approaches for Continuing Care Technical Report 5: An Overview of Continuing Care Services in Canada. Hollander Analytical Services. Victoria B.C., Health Canada. Home Care Development. Provincial and Territorial Home

and social services, an anticipated change in the size and composition of the elderly population is likely to drive the debate with respect to future needs for health and social care for the foreseeable future. The amount and type of LTC required to meet the needs and demands of the elderly might be ascertained by exploring the array of factors presented in this model. A summary of the factors that are included in this model is appended.

2.0 Needs-Based Assumptions

Because our LTC planning model is designed as a framework to determine the amount and type of health and social care services for the elderly, our model has been designed to incorporate both the needs and the demands of care recipients without assuming that these concepts are the same. Our LTC planning model distinguishes demands from needs under the assumption that demand is driven by preferences. Needs, on the other hand, are determined by considering the factors that predispose the elderly to needing long-term health and social care. We propose that, population characteristics, clinical (or health) needs and social care needs meet our definition of needs-based assumptions because when all else is held constant each can serve as a proxy for variations in the need for LTC. However, we suggest that each dimension – population characteristics, clinical needs and social care needs – represent unique contributions to the LTC planning model.

2.1 Population Characteristics

Traditionally, planning models have applied demographic projections to current utilization rates to determine the future needs for LTC.[3] Such planning methods isolate

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Care Programs. June 1999, Long-Term Care Act, 1994 Ontario Ministry of Health and Long-Term Care and the Ontario Ministry of Health and Long-Term Care Website: http://www.gov.on.ca/health/english/program/ltc/ltc_mn.html

[3]Federal-Provincial-Territorial Advisory Committee on Health Services (ACHS) Working Group on Continuing Care. (May 2000). The Identification and Analysis of Incentives and Disincentives and Cost-Effectiveness of Various Funding Approaches for Continuing Care. Technical Report 1: Incentives and Disincentives in Funding Continuing Care Services – Key Concepts, Literature and Findings for Canada. Hollander Analytical Services. Victoria B.C.

changes in the elderly population and implicitly assume that all other factors are held constant. Our model will use the size, growth, age and gender composition of the population as well as its socio-economic status (SES) to develop a LTC planning model. However unlike a traditional planning model, we incorporate preference-based factors as well as additional needs-based factors that will affect LTC planning.

2.2 Clinical Needs

Clinical (or health) needs are related to functional status and can be measured by determining the extent to which a potential care recipient requires assistance with the Activities of Daily Living (ADL) such as walking, washing, bathing and grooming and using the toilet.[4] The general level of disability in a population is important for planning LTC because it has been explicitly assumed that the severity of illness or disability of care recipients proxies the potential need for care.[5] Data pertaining to disability trends in the elderly population are useful for LTC planning in so far as clinical needs reflect the actual degree of disability in a population.

Variation in the underlying clinical needs of the population or variation in the population's social context will result in modified LTC needs. There is a trend in Canada toward reduced levels of disability within the elderly population. In part this has supported a shift of care from institutions to the community. There are indications, however, that a shift of care from an institutional to a community setting may result in an increase in the service needs of community-based clients.[6] At the same time, there is a concern that the community sector lacks the resources to cope with this shift. It is suggested that LTC plans for Ontario

[4]Chappell NL, Living Arrangements and sources of caregiving, *Journal of Gerontology*, 1991 Jan; 46(1): S1-8.
[5]Hawker GA et al., "Differences Between Men and Women in the Rate of Use of Hip and Knee Arthroplasty," *The New England Journal of Medicine*, 342(14): 1016-22, 2000 and Wright J (ed.) Health Needs Assessment in Practice. *BMJ* Books 1998: London
[6]Coyte, PC. 2000. Home Care in Canada: Passing the Buck, unpublished manuscript, Department of Health Administration, University of Toronto and Ontario Association of Community Care Access Centres Human Resources: A Looming Crisis in the Community Care System in Ontario. Position Paper June 30, 2000.

ought to consider the extent to which alternative care settings are appropriate and adequate for the elderly who present with varying levels of disability.

2.3 Social Care Needs

Social care needs make up the final dimension of our needs-based assumptions. We define social care needs by evaluating the social care networks – family, friends and community and social care services – available to the elderly. Social care needs may be measured by the amount of potential informal care required by care recipients through use of proxy measures of household composition or Instrumental Activities of Daily Living (IADLs) which assess the social care needs of the elderly in terms of their ability to perform: housekeeping, household maintenance, transportation, shopping, personal business affairs, and taking medications etc.[7] In addition, social care needs can include the quantity and type of housing available for the elderly since the ability to utilize both formal community-based services and informal care may depend on the care recipient's living conditions.

3.0 Preference-Based Assumptions

Preferences held and acted upon by both care recipients and caregivers are important to incorporate in LTC planning models as they influence the decisions to seek and accept LTC as well as the setting in which such care is received. A more complete understanding of the factors required to forecast the demand for LTC would be achieved through an assessment of the trends in and determinants of such preferences and by an examination of the care seeking behaviours that are based on such preferences. There are three main dimensions to the preference-based approach to LTC planning: pure preferences; enabling factors; and attitudinal factors.

[7]Chappell NL, "Living arrangements and sources of caregiving", *Journal of Gerontology*, 1991 Jan; 46(1): S1-8.

3.1 Pure Preferences

Pure preferences refer to the underlying (or innate) preferences exhibited by care recipients and caregivers with respect to the type and range of LTC services. Specifically, such preferences are instrumental to the LTC seeking behaviours exhibited by care recipients and caregivers, once issues such as service eligibility, financing and perceived service quality have been clarified. Indeed, once such constraints and perceptions have been determined, the LTC seeking behaviours of care recipients and caregivers are driven by an assessment of the benefits and costs associated with alternative care settings and services.

Holding all other factors constant, we anticipate that a particular care setting may be preferred to other settings by care recipients and caregivers, and that if asked, both care recipients and caregivers might reveal this preference.[8] This is important for LTC planning because if pure preferences were not included in a planning model, there may be a miss-match between the type and amount of care provided and the amount of care sought by care recipients and caregivers. We suggest that a more comprehensive LTC planning model would be one that explicitly incorporates the pure preferences of care recipients and caregivers by directly asking these individuals about their preferred settings for LTC.

3.2 Enabling Factors

Enabling factors refer to the availability and accessibility of resources as well as the attributes of the community in which one resides that facilitate or hinder the use of services.[9] We have defined enabling factors in this model as those factors that either facilitate or create barriers

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[8]Gold M.R., Siegel J.E., Russell L.B. & Weinstein M.C., Cost-Effectiveness in Health and Medicine, New York: Oxford University Press, 1996 and Varian, H.R. Intermediate Microeconomics: A Modern Approach Third Edition, W.W. Norton & Company: New York, 1993.

[9] Aday L and Shortell SM, "Indicators and Predictors of Health Service Utilization" in: Introduction to Health Services Third Edition. Williams SJ and Torrens PR (eds.) John Wiley & Sons: New York. 1988, Keysor JJ, Desai T and Mutran EJ, "Elders' Preferences for care setting in short- and long-term disability scenerios", *Gerontologist*, 1999, June; 39(3): 334-44.
and Linden M, Horgas AL, Gilberg R, Steinhagen-Theissen E., "Predicting health care utilization in the very old: the role of physical health, mental health, attitudinal and social factors," *Journal of Aging*, 1997, Feb; 9(1):3-27.

to the use of LTC services. Three provincially determined and locally operationalized enabling factors can be identified: eligibility requirements; cost-sharing arrangements; and the range of LTC services available. Variation in such enabling factors, holding constant underlying preferences for the type and range of LTC services, will alter observed LTC seeking behaviours of the care recipients and caregivers. Moreover, when a preferred LTC service is not available or accessible to potential care recipients, there will be a substitution to alternative services or individuals will forgo services altogether.

3.3 Attitudinal Factors

Attitudinal factors refer to the perceptions held by care recipients and caregivers over an array of health and social care services and their perceived needs for LTC. We discuss two specific attitudinal factors in our model – own health perceptions, and beliefs and attitudes towards the health and social care system. These factors are important in the formation of pure preferences and are therefore important to LTC planning. Attitudinal factors provide insight into both the attributes of LTC and the associated benefits that care recipients and caregivers expect to derive from the receipt of such services and can be used as proxy measures for the demand for care.[10]

4.0 Conclusion

This paper has identified an array of factors that may be employed in the development of a systematic and comprehensive model for LTC planning. A summary of the factors that

[10] Aday, L. and Shortell, SM, "Indicators and Predictors of Health Service Utilization" in: Introduction to Health Services Third Edition. Williams SJ and Torrens PR (eds.) John Wiley & Sons: New York, 1988, Anderson RM, and Newman JS, "Societal Determinants of Medical Care Utilization". *The Milbank Quarterly*, 1973; 51:95-124, Anderson, RM, "Revisiting the Behavioural Model and Access to Medical Care: Does it Matter?" *Journal of Health and Social Behaviour*; 1995, 36:1-10, Keysor, JJ, Desai, T. and Mutran E.J., "Elders' Preferences for care setting in short- and long-term disability scenarios", *Gerontologist*, 1999, June; 39(3): 334-44, Linden M, Horgas AL, Gilberg R, Steinhagen-Theissen E, "Predicting health care utilization in the very old: the role of physical health, mental health, attitudinal and social factors", *Journal of Aging*, 1997, Feb; 9(1): 3-27 and Tsevat J, Dawson NV, Wu AW, Lynn J, Soukup JR, Cook, EF, Vidaillet H and Phillips RS, "Health Values of hospitalized patients 80 years or older. HELP Investigators. Hospitalized Elderly Longitudinal Project", *JAMA*, 1998 Feb 4; 279(5): 371-5.

are considered in our model is appended. Population demographics, in themselves, are insufficient to comprehensively determine either the total demand for LTC in Ontario or the appropriateness of alternative care settings. We believe that a more complete planning model would include both needs-based and preference-based assumptions, and accordingly, we suggest that the time is right for Ontario to adopt a model that is more sensitive to the future needs of the elderly population than a simple model based exclusively on demographic factors.

Appendix

Summary of Conceptual LTC Planning Model	
General Comments on the model	
Our framework offers a broad, comprehensive model that is needs-based and preference-based. It includes clinical and social factors to forecast demand for LTC and also acknowledges that demand will be shaped by future preferences.	
Needs-Based Assumptions	
Population Characteristics	
Factor	How the factor is considered in the model
• Size	*Absolute size increase* *Growth Rates*
• Age	*Most specific age cohorts available and percent change in each cohort*
• Gender	*All age cohorts broken down by gender and percent change in each gender group*
• SES	*Trends in incomes and education levels*
Clinical Needs	*Prevalence and incidence of disability in Ontario* *Eligibility requirements for LTC services according to clinical need*
Social Care Needs	
• Informal Care	*Percentage of population living alone* *Household composition data as a basis to assess social care needs* *Outline of policy and programs that support informal caregiver*
• Community Services	*Quantify the regional availability of community services*
• Housing	*Availability of supportive housing and "suitable" housing for LTC*
Preference-Based Assumptions	
Pure preferences	*Pure preference: identification of regional differences in preferences for alternative care settings*
Enabling Factors	
• Eligibility Requirements	*Describe and identify differences in eligibility requirements for public LTC services*
• Co-payments or out-of-pocket costs	*Describe and measure out-of-pocket expenses for various publicly and privately financed LTC services*
• Availability of Formal LTC	*Identification of regional differences in the availability of alternative care settings* *Identify accessibility differences*
Attitudinal Factors	
• Self Rated Health	*Self-rated health*
• Perception of health care services	*Population perceptions of health and social care services*