Use of Physician Services by Older Adults: 1991/1992 to 2000/2001

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RÉSUMÉ

Les Canadiens et Canadiennes ont exprimé des inquiétudes au sujet de la diminution de l'accès aux médecins de famille (MF). Des données sur les services fournis entre 1991/1992 et 2000/2001, par des médecins dont le nom n'a pas été divulgué, ont été utilisées pour évaluer les changements en matière d'effectifs disponibles ainsi que la fréquence des consultations de MF et de spécialistes, en fonction de l'âge des patients, à Winnipeg, au Manitoba. La proportion de médecins dans la population a diminué de 7,5 p. 100, celle de MF, de 4,8 p. 100 et celle de spécialistes, de 10,0 p. 100. Dans la population en général, la fréquence des visites chez des MF a diminué de 3 p. 100. Chez les personnes âgées, la fréquence des visites chez le médecin a augmenté de 2,3 p. 100, celle des visites chez des MF a augmenté de 10,9 p. 100 et celle des visites chez des spécialistes a diminué de 15,7 p. 100. Par comparaison, nous constatons des diminutions dans la consultation de MF chez les enfants de moins de cinq ans (25,5 p. 100) et chez les jeunes de 6 à 19 ans (18,6 p. 100). Des augmentations dans la consultation des MF et des diminutions dans la consultation des spécialistes ont surtout été constatées chez les personnes âgées de 65 à 84 ans. En 2000/2001, les personnes âgées représentaient 25 p. 100 de toutes les visites chez un MF. L'accroissement de la consultation des MF par des personnes âgées découle moins de la croissance du nombre d'aînés que du fait qu'ils sont plus nombreux à consulter un MF chaque année et, dans certains cas, à remplacer les soins primaires par des soins secondaires.

ABSTRACT

Canadians have expressed concern that access to family physicians (FP) has declined. Anonymized physician services data for 1991/1992 to 2000/2001 were used to evaluate changes in supply and age-specific rates of use of FPs and specialists in Winnipeg, Manitoba. Physician-to-population ratios declined 7.5 per cent, FP-to-population ratios declined 4.8 per cent, and specialist-to-population ratios declined 10.0 per cent. Among the general population, FP visit rates declined 3 per cent. Among older adults, physician visit rates increased 2.3 per cent, FP visit rates increased 10.9 per cent, and specialist visit rates declined 15.7 per cent. By comparison, we document declines in FP use by those younger than 5 years (25.5%) and those 6 to 19 years of age (18.6%). Increases in FP and declines in specialist use occurred primarily among those aged 65 to 84 years. By 2000/2001 older adults accounted for 25 per cent of all FP encounters. Gains in FP use among older adults was less attributable to the presence of more seniors and more related to the fact that a higher proportion of them are visiting a FP each year and, potentially, substituting primary for secondary care.

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Introduction

A large and growing number of people in Canada have expressed concern that access to physicians in their communities, particularly general practitioners and family physicians (FP), is deteriorating (Conference Board of Canada, 2001). Perceptions of problems are so widespread that the nation's ministers increased investments in primary health care to enhance ''access to a health provider 24 hours a day, 7 days a week'' (Health Canada, 2003). A number of provincial and federal committees and organizations have responded to current perceptions of physician shortages by recommending increases in both medical school enrolments and external recruitment (Expert Panel on Health Professional Human Resources, 2001; Standing Senate Committee on Social Affairs, Science and Technology, 2002).

All this concern and recent fast-track policies to enhance physician supply have arisen despite a fundamentally puzzling fact: physician-to-population ratios across Canada have remained relatively stable since the early 1990s when physicians, at least in urban areas, were considered to be in oversupply (Chan, 2002; Watson, Roos, Katz, & Bogdanovic, 2003). But if overall physician supply has not changed, what underlies the shifts from historic widespread perceptions of physician surpluses to current views of shortage? It could ''feel'' as if there is a physician shortage despite stable supply if patterns of delivery have changed in ways that influence the volume of care received by particular groups of patients. In other words, significant increases in use of care by one population (e.g., older adults) could create problems in access to services for other populations (e.g., the young).

Per capita use of physicians, and FP services in particular, steadily increased in Canadian provinces from the late 1970s to the early 1990s. During this period, people of all ages visited physicians more frequently, but annual rates increased most rapidly for older adults. Thus, seniors consumed an increasing proportion of all physician services (Barer, Evans, & Hertzman, 1995; Black, Roos, Havens, & MacWilliam, 1995; Demers, 1996; Eyles, Birch, & Newbold, 1995). These increases in use, however, occurred at a time when physician-to-population ratios and service output per physician (particularly specialists) was also increasing. Since there was greater supply to be used by the population, visit rates increased accordingly (Evans, McGrail, Morgan, Barer, & Hertzman, 2001; Rosenberg & James, 2000). While patterns of physician use by older adults during these historic periods are well understood, temporal patterns of FP and specialist use over the past decade in Canada have not been documented (Rosenberg & James, 2000).

The greying of the Canadian population – coupled with observations that older people have greater illness burdens and use more services than their younger counterparts, and that the intensity of this care has increased over time – has prompted some to speculate that population aging will threaten the sustainability of a health care system that permits universal access. In fact, 30 per cent of Canadians believe that population aging is the key factor responsible for current health care budget pressures (POLLARA Research, 2002). During a period of stable per capita physician supply, it is certainly plausible, and indeed likely, that providing more care to older persons may mean that younger people would experience difficulties accessing services. Yet temporal patterns of older adults' use of FP and specialist services during the 1990s has not been documented.

The health status of recent cohorts of older adults (and thus their need for care) has changed in recent years in ways likely to influence seniors' use of physician services. Research increasingly supports the notion that people live longer and the onset of chronic diseases occurs later in life such that morbidity is compressed into shorter periods before death (Fries, 1980, 2002). The vast majority of older adults have relatively few health problems, and the health of recent cohorts of older adults is improved relative to their predecessors (Chen & Millar, 2000; Freedman, Martin, & Schoeni, 2002; Menec, MacWilliam, Soodeen, & Mitchell, 2002). In Canada, improved overall health of seniors is evidenced by declines in age-specific mortality and increases in dependence-free life expectancy (Martel & Belanger, 2000). Yet have these changes altered use of FP and specialist services?

The purposes of this paper are (1) to evaluate the extent and nature of physician use among older adults over a period of enhanced health status and relatively stable FP-to-population ratios, and (2) to consider the potential impact of any change in FP utilization on perceptions of adequacy of physician supply and access to primary care. We focus on the use of FP services, since primary care largely serves as the entry point to the health system, and the vast majority of people visit a FP once a year (Jaakkiamainen, 2001; Sanmartin, Houle, Berthelot, & White, 2002). We also assess use of specialists to determine if older adults contact these practitioners more (or less) over time as their contacts with FPs change. This population-based study was undertaken using data from Winnipeg, MB – a city, like others in Canada, where FPs and citizens express frustration

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about access to FPs, and journalists document widely held views that many FP practices restrict access to new patients (Square, 2001). Student enrolment in the city's medical school was cut in the early 1990s as a result of prevailing perceptions of adequate physician supply (Bueckert, 1993) and increased in the late 1990s in response to perceptions of insufficient supply (Square, 2001). We hypothesized that FP and specialist use among older adults increased over the period.

Methods

We used anonymized population registry and physician utilization data for people who resided in the Winnipeg Regional Health Authority any fiscal year from 1991/1992 to 2000/2001 (Watson, Bogdanovic, Heppner, Katz, Reid, & Roos, 2003). Winnipeg residents represent roughly two thirds of the population of the province of Manitoba. The majority of physicians practise in this capital city, and their services are covered under a universal health plan that has no deductible or co-payment. All measures were derived from billing data from physicians who worked on a fee-for-service (FFS) basis or who received alternative types of remuneration and submitted "evaluation claims" (i.e., roughly 7% of FPs in 2000/2001 and 2% of total billings). The completeness and validity of the population registry and physician billing data have been assessed (Robinson, Young, Roos, & Gelskey, 1997; Roos et al., 1993).

For each year, we provide descriptive analysis to measure the proportion of people making at least one visit and the mean number of visits per annum for Winnipeg residents stratified by patient age and physician type (i.e., FP versus specialist). The proportion of people who visited a FP was calculated by dividing the number of residents who made at least one visit to a physician during the year by the total number of residents in Manitoba Health registration files. The count of visits per population was calculated by dividing the sum of all visits received by residents during a fiscal year by the size of the population. In order to differentiate whether changes in per population utilization were attributed to the proportion of older adults who had at least one visit or to the average number of visits made by those using the system (i.e., patients), we counted the number of visits per patient. This figure was calculated by dividing the sum of all visits received by residents by the number of patients who visited at least once. When we report per cent changes in rates, these values reflect change on the basis of age and gender standardized calculations using the direct method and the 1991/1992 Winnipeg population as the standard. Visits were defined as any face-to-face contact between a Winnipeg resident and a physician that occurred while the patient was not a hospital inpatient. Contacts may have occurred in physician offices, personal care homes, outpatient departments, or at either of the two largest emergency departments in Winnipeg. Visits for prenatal and postpartum care are not included as a result of data limitations.

Findings

The size of the Winnipeg population remained stable over the study period ($N = 653{,}452$ in 1991/1992, $N = 654{,}930$ in 2000/2001), but the age structure changed. The size of the population less than 44 years declined 8 per cent, while that aged 45 to 64 years (i.e., baby boomers) increased 25 per cent. The population 65 to 74 years old declined 6 per cent, yet the population 75 to 84 years of age increased 19 per cent, and the population aged 85 or more increased 42 per cent. By 2000/2001 adults aged 65 to 74, 75 to 84, and 85 or more years represented 7, 5, and 2 per cent of the Winnipeg population, respectively. Overall, Winnipeggers aged 65 or more years represented 14 per cent of the population in 2000/2001, compared to 13 per cent in 1991/1992.

The number of Winnipeg FPs who billed Manitoba Health (or submitted "evaluation" claims) in a fiscal period declined 4.6 per cent from 634 to 605 in 1991/1992 and 2000/2001. FP-to-population ratios declined 4.8 per cent from 97 to 92 per 100,000, but average workloads per FP remained relatively stable (Watson, Roos, et al., 2003). Over the same period, the number of Winnipeg specialists declined 9.8 per cent from 661 to 596, and specialist-to-population ratios declined 10 per cent from 101 to 91 per 100,000. Overall physician-to-population ratios declined 7.5 per cent (Figure 1).

The vast majority of older adults visited a FP at least once per year, and this proportion increased gradually over the study period. More specifically, in 2000/2001, 88.5 per cent of seniors visited a FP, representing an 8 per cent increase in the standardized rate since 1991/1992. Across the age groups, the proportion of Winnipeg residents visiting FPs was 86.4 per cent (aged 65 to 74 years), 89.0 per cent (75 to 84 years), and 94.5 per cent (85+ years) (Table 1). In 2000/2001, 59.7 per cent of older adults visited a specialist at least once — a figure virtually unchanged since 1991/1992. Across the age groups, the proportion of Winnipeg residents visiting a specialist was 56.5 per cent (age 65 to 74 years), 62.6 per cent (75 to 84 years), and 63.9 per cent (85 years and more).

Older adult patients who visited a FP at least once received slightly more of these services by the end of the 10-year period. More specifically, in 2000/2001

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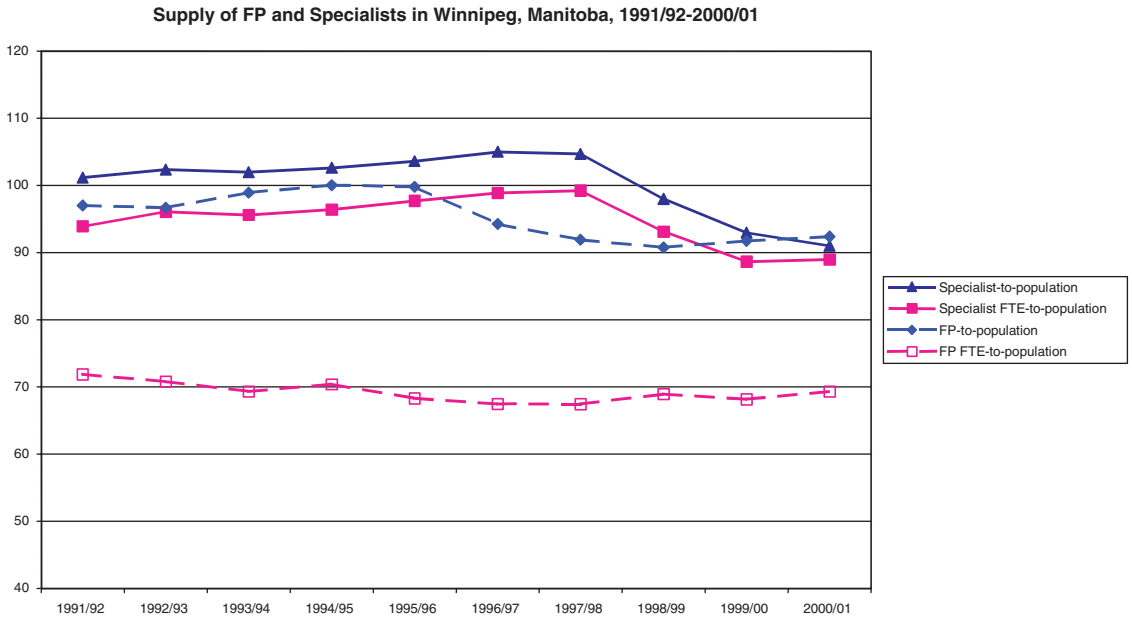

Figure 1: Supply of FPs and specialists in Winnipeg, MB, 1991/1992–2000/2002

Table 1: Utilization of FP services by Winnipeg residents, by age, 2000/2001 (*N* = 654,930)

	2000/2001 Rates		Change in Standardized Rates 1991/1992–2000/2001	
Population	Visited at Least Once (%)	Visits per Population (#)	Visited at Least Once (%)	Visits per Population (#)
0–5 Years	62.4	2.39	−11.1	−25.5
6–19 Years	62.6	1.83	−6.9	−18.6
20–44 Years	74.7	3.10	−4.0	−10.6
45–64 Years	79.1	4.04	1.9	0.2
65–74 Years	86.4	5.48	7.3	11.1
75–84 Years	89.0	6.73	8.4	16.0
85+ Years	94.5	7.96	12.6	1.5
Winnipeg	74.6	3.61	−1.0	−3.1

seniors who visited a FP at least once visited an average of 7.1 times, representing a 4.7 per cent increase in the standardized rate since 1991/1992. Across the age groups, crude visit rates per patient in 2000/2001 were 6.3 visits (age 65 to 74 years), 7.6 (age 75 to 84 years), and 8.4 (age 85 years and more), representing an increase in standardized rates from 3.6, 7.0 and 9.8 per cent in each age group, respectively, in 1991/1992.

The population of older adults contacted physicians just as often in 2000/2001 as they did 10 years prior, but they visited FPs more often and specialists less often. In 2000/2001, adults aged 65 or more made an average of 8.51 physician visits, a gradual increase of 2.3 per cent over the decade. An average of 6.28 of these visits were made to FPs, a gradual increase of 10.9 per cent over the decade. Conversely, older adults made 2.23 specialist visits in 2000/2001, a decline of 15.7 per cent since 1991/1992. Increases in use of FPs and declines in use of specialists were particularly pronounced among those 65 to 84 years (Table 2).

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Table 2: Physician visits per older adult population, by type of physician, 1991/1992–2000/2001

Age of Resident	Type of Physician	Visit Rates per Population (#)		Change (%)* 1991–2001
		1991/1992	2000/2001	
65–74 years	FP**	4.94	5.48	11.1
	Specialist	2.50	2.09	−16.4
75–84 years	FP	5.81	6.73	16.0
	Specialist	2.99	2.42	−19.1
85+ years	FP	7.98	7.96	1.5
	Specialist	2.29	2.21	−4.5
65+ years	FP	5.55	6.28	10.9
	Specialist	2.64	2.23	−15.7
	All physicians	8.19	8.51	2.3

*Change in standardized rates **FP = family physicians and general practitioners

By 2000/2001, the population aged 65 or more years were responsible for 25.5 per cent of all visits made to Winnipeg FPs (Figure 2). This represents a 5.2 percentage point increase in the "greying" of visits since 1991/1992. The increase in the number and proportion of FP encounters with older adults was influenced more by an increase in the number of FP visits per population than by the growth in the size of the older population. Moreover, increases in FP visits per population appear more attributable to increases in the proportion contacting a FP at least once, than by increases in the number of visits per patient. By 2000/2001, after accounting for increases in the numbers of Manitobans over age 65, the hypothetical proportion of FP encounters made by older adults would have been 21.9 per cent (rather than 25.5%) if there had been no increase in the visit rate per population and the proportion of older adults who contacted FPs at their 1991/1992 rates (Figure 2).

As also illustrated in Figure 2, we found that as the relative proportion of care delivered by FPs to seniors increased, there was a simultaneous decline in the overall proportion of visits made by children and adolescents. And the proportion of encounters between FPs and adults aged 20 to 44 years declined over the same period. Conversely, the proportion of encounters with adults aged 45 to 64 years increased. An analysis of age-specific rates of FP use by different age populations, as illustrated in Table 2, suggests that increases of FP use among older adults occurred concurrent with declines in use among pediatric and adolescent populations.

Discussion

We document increased use of FPs among older adults during a decade of enhancements in their health status, relatively stable FP-to-population ratios and workloads per FP, and growth in public perceptions of restrained access to primary care. In comparison to increases in age-specific FP visit rates among older adults (10.9%), we documented declines in specialist visit rates over the study period (15.7%). While we did not explore hypotheses as to why this might have occurred or what impacts on health outcomes may have resulted, it could be that temporal trends in utilization relate to either (or both) changing demands by older adults or changing patterns of practice among physicians.

While the overall physician visit rates of older adults were relatively unchanged over the period, seniors used more primary and less specialty care. One could argue that continuity of care may increase when a greater proportion of overall care is delivered by FPs, or that quality of care is compromised when specialists provide a lower proportion of overall care. Alternatively, there may be little or no effect of temporal shifts in the mix of providers who deliver care. Substitution of FP for specialist services should be assessed in relation to quality of care delivered, and ultimately health outcomes. Should FPs be able to "substitute" lower-cost services that would otherwise be provided by specialists, without adversely affecting quality or health outcomes, these shifts represent more cost-effective delivery of physician services among seniors.

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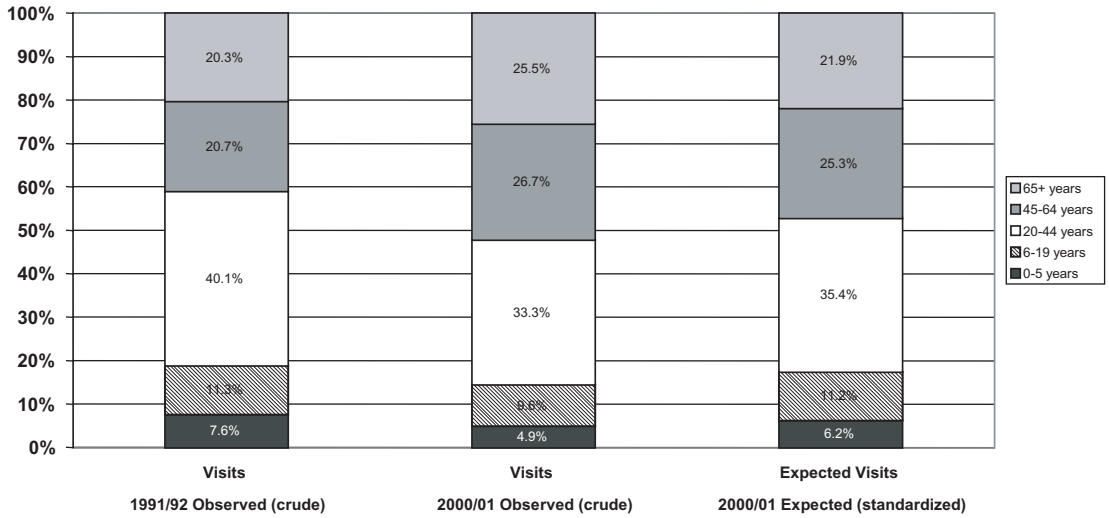

Figure 2: Proportion of total FP visits, by age, 1991/1992–2000/2001, observed and expected

Our analyses demonstrate that the face of primary care has rapidly become more ''grey'' – older adults now account for one quarter of all encounters with FPs, compared to about one fifth 10 years earlier. Furthermore, these shifts are more attributable to increases in the proportion of older adults who visit FPs than increase in visit rates among users. Another important finding is that FP visit rates increased among older adults at the same time there were declines in FP use among children and adolescents. The reason children saw FPs less often over the study period was not because they saw pediatricians or other specialists more often (Watson, Bogdanovic, et al., 2003). The provision of a disproportionate share of services to older adults is likely appropriate, given their higher burden of illness and co-morbidity relative to younger age groups (Iezzoni, 1997). But further research is required to determine the effects of this generational trade-off – providing ever more FP services to older adults at the expense of less care to children and adolescents – on the accessibility of primary care and the health of the population.

Increases in per capita use of FP services among older adults may be appropriate if they respond to changing patterns of health among the population. For example, seniors may increasingly require or receive more curative or rehabilitation treatments, have access to interventions directed toward health protection, or have health conditions best served by FPs versus specialists. Menec et al. (2002) found that the greatest health improvements among older adults in Manitoba were among those 65 to 74 years of age, and that the treatment prevalence of chronic disease increased among this cohort. Could more aggressive screening for and treatment of chronic conditions by FPs among the cohort 65 to 74 years account for the simultaneous increases in chronic disease treatment prevalence and improvements in health status? Or alternatively, is the increased intensity of care provided by FPs to this cohort of older adults largely independent of their overall health gains? More research is needed to clarify these questions, particularly as the policy and practice community plan to ensure adequacy of future physician supply for an aging population. Interestingly, research has demonstrated that roughly 30 per cent of the increase in physician visits among older adults in Manitoba between 1973 and 1983 was attributable to individuals in good health (Black et al., 1995).

What about stable FP visit rates among the oldest-old? If the compression of morbidity hypothesis is true, then one might expect physician visit rates among older adults to rise over time during the period shortly before death. Additionally, should morbidity during the period before death be higher among recent cohorts relative to their predecessors, then one might expect visit rates during this time to increase over the period. Might this explain our finding of increases in visit use among older adults? We calculated FP visit rates among the population in the year before death, and found these rates to be 1.6 times higher than visit rates among other older adults. However, while people receive significantly more FP services in the year before death, these patterns of FP use were stable over the study period (Watson, Bogdanovic, et al., 2003).

There are important limitations of this study: our analyses are limited to utilization of physician services, we did not attempt to measure the health of different age cohorts, this project represents a case

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study in one Canadian city, and we could not measure demand for care. Indeed, we know little about difficulties (if any) people may encounter in arranging to visit a physician, were unable to assess issues of overuse or underuse, and did not assess the relationships among utilization, health status, and patient outcomes.

Conclusion

The findings of this study are important to policy debates and analyses regarding the current and potential impact of an aging population on access and availability of FPs. Over the past decade, we document an increase in FP visit rates and decline in specialist visit rates among older adult populations, and an increase in the proportion of primary care encounters that are between FPs and older adults. These findings suggest that over time FP supply and availability are increasingly important to the care of older populations. But as an increasing proportion of FP encounters are with older adults, physicians (and other people) may increasingly believe that demographic changes are the culprit. Such is not the case. Increases in encounters with older adults are less attributable to the presence of more seniors, but related more to the fact that seniors are visiting FPs more frequently and, potentially, substituting primary for secondary care.

All these changes have occurred at the same time as substantive reductions in FP service levels among children and adolescents. Increases in one population's use of FPs can create problems in accessibility or reductions in access for other populations during a period of stable supply of these practitioners. Therefore, temporal shifts between generations in rates of FP use point to the necessity of understanding the relationship between health and levels of care for age-specific groups, and shifts in consumption of FPs between age cohorts on the health of the population.

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