

# Physician Use by the Elderly over an Eight-year Period

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**Abstract:** Investigation of ambulatory use of physicians by older persons over an eight-year period reveals that 60 per cent visited physicians with similar frequency for six or more years; 22 per cent regularly made two or less visits and 14 per cent made seven or more visits each year. Analyses reveal cohort effects rather than age effects to be of primary importance in determining an individual's regular pattern of physician use. (*Am J Public Health* 1985; 75:1333-1334.)

## Introduction

Several recent studies have demonstrated a high degree of stability in the frequency with which older persons visit the physician from year to year.<sup>1-3</sup> Roos and Shapiro<sup>1</sup> observed stable physician utilization over two years for 85 per cent of the Manitoba Longitudinal Study On Aging (MLSA) sample. McCall and Wai<sup>2</sup> reported 27 per cent of continuously enrolled Medicare beneficiaries to be at the same level of physician use for four years. The ability to draw firm conclusions from these studies is limited, however; the observation periods are relatively short and, with Medicare data, underreporting of physician use is a problem. With public expenditures for health services consumed by older persons increasing and with the number of individuals surviving to old age rising, it is of special importance to identify the way older persons do, in fact, use the physician over an extended time period.

Data from the Manitoba Longitudinal Study on Aging are used here to describe the stability in physician use over an eight-year period by older individuals.

## Methods

The MLSA has been described elsewhere.<sup>4-5</sup> In brief, information on the health services utilized by a random sample of community dwelling Manitoba residents 65+ (n = 3,536) from 1970-77 was obtained from the universal health insurance program maintained by the provincial government. All provincial residents and virtually all physician and hospital services are covered under this program. The claims filed by physicians for payment of ambulatory physician visits (APV) are used for this study. Extensive testing has shown that these records are accurate and unbiased by either over- or underreporting.<sup>5,6</sup>

The sample for this analysis is comprised of the 2,029 community dwelling residents whose records of physician use for the eight study years were complete. The average age of study subjects in 1971 was 72.03 years (s.d. = 5.22), and, reflecting the White elderly population in Manitoba in 1971, males and females are equally represented.

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## Results

Table 1 shows the distribution of APV use each study year. As expected, a substantial proportion were nonusers (14-21 per cent) or high users (7+ visits) (23-38 per cent) each year. Examination of the relationships between age and sex and APV use revealed females to be overrepresented among high users and age to be unrelated to use in any year; APV use increased as the cohort ages increased.

To determine whether APV use is stable over time, we examined the degree to which the individual visited the physician with the same or "nearly the same" frequency each year. Two definitions of "nearly the same frequency" were used. In the first, a person's APV use each year could vary up to four visits (e.g., 0-3, 1-4, 2-5 etc.); for the second, APV use was permitted to vary by only one visit.

Table 2 shows the number of individuals who met the first definition for 6+, 7+, or 8 years. For 59.6 per cent of the sample, APV use was stable for 6+ years, while 35 per cent and 16 per cent manifested stable APV behaviors for 7+ and 8 years, respectively. Notably, the largest proportion of stable users (21.8 per cent) regularly made two or fewer APV a year for at least six years; 14 per cent of this group were

**TABLE 1—Per Cent Distribution of Ambulatory Physician Visits Each Year for 1970-77**

Number APV	Year							
	1970	1971	1972	1973	1974	1975	1976	1977
None	21.5	21.3	20.3	18.9	15.8	14.7	14.9	14.4
1	14.4	13.4	13.2	11.8	10.8	10.0	9.3	9.1
2	11.8	11.7	11.2	9.8	10.2	8.2	9.8	9.6
3	10.4	11.1	8.2	9.2	10.0	9.6	7.8	8.3
4	7.9	7.3	8.1	7.9	8.3	8.3	8.7	7.2
5	6.2	6.4	7.1	7.2	6.6	7.7	7.2	7.6
6	5.3	4.9	5.2	5.4	6.3	5.3	6.8	6.2
7+	22.5	23.9	26.7	29.8	32.0	36.2	35.5	37.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**TABLE 2—Number and Per Cent of Persons Whose Frequency of Physician Contact Varied within 4 Visits or Was 7 or Greater for 6+, 7+, or All 8 of the Study Years 1970-77**

Number of APV	Number of 8 Study Years at Same Frequency Level					
	8		7+		6+	
	n	%	n	%	n	%
0,1,2 visits	118	5.8	263	12.9	442	21.8
0,1,2,3 visits	86	4.2	156	7.7	212	10.5
1,2,3,4 visits	15	0.7	53	2.6	101	4.9
2,3,4,5 visits	9	0.4	31	1.5	74	3.6
3,4,5,6 visits	1	0.05	21	1.0	43	2.1
4,5,6,7 visits	1	0.05	12	0.6	32	1.6
5,6,7,8 visits	—	—	4	0.2	13	0.6
6,7,8,9 visits	—	—	1	—	5	0.2
7+ visits	95	4.7	178	8.8	287	14.1
No regular frequency	1704	84.0	1310	64.6	820	40.4

**TABLE 3—Number and Per Cent of Persons Whose Frequency of Physician Contact Varied within 1 Visit of Was 7 or Greater for 6+, 7+, or All 8 of the Study Years 1970–77**

Number of APV	Number of 8 Study Years at Same Frequency Level					
	8		7+		6+	
	n	%	n	%	n	%
0,1 visits	63	3.0	146	7.21	268	13.9
1,2 visits	2	0.09	8	0.4	25	1.2
2,3 visits	—	—	2	0.1	19	.9
3–4 or 4–5 visits	—	—	—	—	7	0.3
5–6 or 6–7 visits	—	—	—	—	1	0.01
7+ visits	95	4.7	178	8.8	287	14.1
No regular frequency	1869	92.1	1695	83.5	1422	70.1

**TABLE 4—Distribution of Level of Physician Use by Sex for Age Groups 65–69, 70–74, 75–79, and 80+ among 1209 Stable Physician Users\* Who Were Living in the Community through December 1977**

Age/Sex	Level of Physician Use				Total
	Very Low	Low	Medium	High	
65–69 years					
Male	110 (47.2)	62 (26.1)	21 (9.01)	40 (17.2)	233 (49.3)
Female	76 (31.7)	62 (25.8)	37 (15.4)	65 (27.1)	240 (50.7)
70–74 years					
Male	89 (48.6)	42 (22.9)	13 (7.1)	39 (21.3)	183 (47.1)
Female	58 (28.3)	55 (26.8)	30 (14.6)	62 (30.2)	205 (52.9)
75–79 years					
Male	36 (35.6)	26 (25.7)	18 (17.8)	21 (20.8)	101 (45.1)
Female	34 (27.6)	30 (24.4)	30 (24.4)	29 (23.6)	123 (54.9)
80+ years					
Male	21 (33.3)	17 (26.9)	6 (9.5)	19 (30.2)	63 (50.8)
Female	18 (29.5)	19 (31.1)	12 (19.7)	12 (19.7)	61 (49.2)

\*Excluded are 424 males (42%) and 396 females (39%) who were not stable users.

stable high users. Extreme deviation from a person's usual APV frequency was observed occasionally but followed no regular pattern.

Table 3 shows the number of individuals whose use from year to year varied by only one visit. For fully 30 per cent of the sample, APV use was virtually unchanged for six or more of the eight years.

The relationships between age and sex and physician use were examined using a stratified analysis approach recommended by Kleinbaum.<sup>7</sup> Individuals whose APV use was stable for 6+ years were classified as very low users ( $\leq 2$  visits), low users (0–3, 1–4 visits), medium users (2–5, 2–6, 4–7, or 6–9 visits), and high users (7+ visits). All others

formed a single group of varying users. Neither age nor sex was associated with stable use. Table 4 presents the distribution of level of APV use by age and sex for the 1,209 stable users shown in Table 2. Females at every age were less likely than males to be very low users and, except for those aged 80+, more likely to be high users. Age was unrelated to level of use among females; however, males ages 75–79 and 80+ were more likely to be stable medium or high users than those in the younger age groups.

### Discussion

This study reveals that, when complete information on physician use is available for an extended period of time, not only were a substantial portion of elderly seen to be remarkably stable in their APV use, but also almost 22 per cent regularly were very low physician users. Only 14 per cent regularly manifest the high use behaviors of 7+ visits per year. These findings may reflect the fact that a survivor cohort was studied. In similar analyses not shown here, however, almost identical results were observed among continuously enrolled individuals who died or entered a nursing home between 1974 and 1977.

The observed weak association between age and level of use and the absence of an association among females demonstrates the importance of cohort effects rather than age effects in predicting physician use over time. While this is consistent with findings from cross-sectional studies based on one year of observation,<sup>8,9</sup> it is intriguing that, for such a large proportion, physician visiting behaviors are stable though an increase in the rate of chronic conditions with age might be expected, especially among those 75 years of age and older.

The findings presented here provide strong support for the development of mechanisms whereby the regular physician use patterns of older individuals can be identified, the extent to which their APV use is appropriate to their health status can be assessed, and intervention strategies to correct any discrepancies between need and use can be initiated. This would be particularly sensible for persons ages 65–69 since any under- or over-utilization associated with their regular pattern of use can be expected to persist for a substantial number of years.

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