

# Patients of internists in hospital outpatient departments and in private practice

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To test the contention that patients in outpatient departments and private practices differ, variables were assessed that might affect both the process and the outcome of medical care. Two groups of 60 patients consulting nine Montreal internists who worked in both private practice and in an outpatient department of a university teaching hospital were surveyed. The internists served as their own controls. The two groups of patients were compared for 57 demographic, socio-economic, access, utilization, attitudinal and current medical status variables. Financial factors were minimized by the existence of universal health insurance. The outpatient group was found to be older, less fluent in English, less likely to be employed, less educated, less wealthy, more dependent on public transportation, more disabled, more likely to use ambulatory services, more anxious about health, and more sceptical about physicians, yet more dependent on them than the private practice group. The outpatient group tended to have more active, significant medical conditions and to receive more prescriptions for medication than the private practice group, in contrast to the national patterns in the practice of internal medicine in the United States. Medical educators, researchers, administrators and providers of health care who have assumed that these two groups of patients are comparable must re-evaluate their practices.

Dans le but de vérifier la prétention voulant que les patients de clinique externe diffèrent de ceux de pratique privée, on a évalué les variables susceptibles d'affecter le processus aussi bien que le résultat des soins

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médicaux. L'enquête a été menée chez deux groupes de 60 patients adressés à neuf médecins internistes de Montréal qui oeuvraient en pratique privée ainsi qu'à la clinique externe d'un hôpital universitaire. Chaque interniste était son propre contrôle. Les deux groupes de patients ont été comparés pour 57 variables démographiques, socioéconomiques ou relatives à l'accessibilité, l'utilisation, l'état d'esprit et l'état de santé actuel. Les facteurs financiers se sont trouvés minimisés par l'existence d'un programme d'assurance santé universelle. On a trouvé que le groupe de patients de clinique externe était plus âgé, parlait moins l'anglais, était moins susceptible d'avoir un emploi, était moins instruit, moins riche, plus dépendant des transports publics, plus invalide, plus susceptible d'utiliser les services ambulatoires et plus anxieux de sa santé, et faisant preuve de plus de scepticisme au sujet des médecins tout en étant davantage dépendant d'eux que le groupe de pratique privée. Le groupe de clinique externe avait tendance à avoir des affections plus actives et plus importantes du point de vue médical, et à recevoir plus de prescriptions pour des médicaments que le groupe de pratique privée, ceci en divergence avec la tendance nationale de la pratique de la médecine interne aux États-Unis. Les professeurs de médecine, les chercheurs, les administrateurs et les pourvoyeurs de soins médicaux qui ont supposé que ces deux groupes de patients étaient comparables doivent réévaluer leurs pratiques.

Many people have criticized hospital outpatient departments, especially in academic medical centres, for the quality of their patient care, medical education and health care research.<sup>1-4</sup> Some have suggested that the outpatients account for most of the department's deficiencies. Others conveniently assume that outpatients are similar to the patients seen in private practice. In this context outpatient departments can be defined as university-affiliated, hospital-based medical clinics of both general and subspecialty types, regardless of hospital size.

It is time to test directly the rep-

resentativeness of outpatients for several reasons:

- The university outpatient department continues to be the primary site of ambulatory medical education for most graduates selecting a career in private practice.

- Most ambulatory clinical research takes place in university outpatient departments and the results are extrapolated to private practice patients.

- Resource allocations for outpatient services are difficult to compare with those for private practice without knowing the service needs of the two settings.

- The private sector is frequently regarded as superior to the academic sector in administration and logistics, but the possibility that outpatients contribute to the inefficiency of the university outpatient department has not previously been considered.

To be most revealing, the comparison between hospital outpatients and private practice patients must minimize the potentially confounding variables of patients' ability to pay and interphysician variability. Our study, described below, was a direct comparison of the patients treated by a group of internists participating in both private and outpatient practice; we obtained our data by interviewing the patients and reviewing their medical records.

## Methods

We selected the polyclinic of the Royal Victoria Hospital, McGill University, Montreal as the outpatient study site; services are provided both by faculty in general internal medicine and subspecialties and by affiliated house staff. Each year approximately 7000 patients are treated during about 34 000 patient visits. Almost all patients seeking treatment have been referred from another part of the hospital. In a recent survey it was found that more than three quarters of them considered the polyclinic their main source of medical care.<sup>5</sup> About half of the 141 physicians at the clinic are senior staff directly responsible for

75% of the visits, and 39% of them have expressed the wish to see only patients whose condition is within their subspecialty area, although 84% of them are fully certified subspecialists.

We identified 32 internists, both generalists and subspecialists with university appointments, who saw patients in both the polyclinic and private practice. Noting only their subspecialty interests we selected one member of each subspecialty group using a table of random numbers. All physicians agreed to cooperate, although one was subsequently unable to participate.

We interviewed each of the nine internists during May 1975, using a standardized questionnaire to obtain professional background information (Table I). For each internist we arranged to attend half-day private practice and outpatient department sessions, usually within 72 hours, but always within 2 weeks of the interview. In most cases we selected comparable sessions held at the same time of day.

During each session we attempted to interview all patients and achieved an overall response rate of 93.8%. According to standard demographic criteria, the nonrespondents did not differ significantly from the respondents. Patients were interviewed for 5 to 10 minutes in a waiting area affording moderate privacy. The interviews were conducted in French or English at the patient's convenience; we needed a family member to translate in only 6% of interviews. From the medical records we obtained information on active problems, prescribed medication and past medical history. Overall, we gathered data to compare the two groups for 57 demographic, socioeconomic, access, utilization, attitudinal and current medical status variables with less than 5% nonresponse items. The use of a structured questionnaire minimized observer bias but the interviewers knew which type of practice setting each patient was from. In each type of practice setting 60 patients were interviewed.

We performed multivariate and univariate analysis to identify differences between the two groups of patients. Four variables (patient age, degree of activity, number of ambulatory visits in the preceding 12 months and socioeconomic status) were selected prior to data collection

for multivariate analysis as the major components defining the patient population. Descriptive univariate analysis employed chi-square and Student's *t*-tests, with 0.05 as the limit of statistical significance.

A number of scales were adapted from the literature for grading the patient's degree of activity,<sup>6</sup> satisfaction<sup>7</sup> and tendency to hypochondriasis.<sup>8</sup> The scale for socioeconomic status included the patient's educational level and household income.

## Results

### Multivariate analysis

To maximize the likelihood of demonstrating statistically significant group differences, we selected the four variables listed in Table II. These differences must be interpreted with caution.<sup>9</sup> Several variables, such as degree of activity and socioeconomic status, are interdependent. Moreover, one might predict that the differences in 3 of the 57 variables would have P values equal to or less than 0.05 by chance alone, given the large number of variables we studied. Multiple analysis of variance confirmed the statistical significance of intergroup differences for the small number of preselected variables.

### Univariate analysis

Although the interdependence and

large number of the remaining variables do not permit firm conclusions to be drawn, they do allow the inference that variables with low P values have the most interest for future studies.

Demographic differences were limited to age and language fluency. The average age (mean  $\pm$  standard deviation) of the hospital outpatients was 10 years greater than that of the private practice patients (55.3  $\pm$  17.6 v. 45.5  $\pm$  17.8;  $P < 0.01$ ). Three times as many outpatients spoke French with their physician as did private practice patients (30% v. 10%,  $P < 0.01$ ), although seven of the nine physicians rated their own fluency in French as "fair" or "poor". In contrast, we observed no major intergroup differences in sex ratio, marital status, birthplace or household size.

Table III reviews the major socioeconomic status differences — current major activity, level of education and household income before taxes. For the sake of simplicity, the complex scales were divided into two proportions. Although the numbers were small, major intergroup differences did not diminish for the three other variables studied by multiple analysis of variance when we controlled for socioeconomic status.

Medical access characteristics

Table I—Professional characteristics of nine participating internists

Characteristic	Median	Range
Age, yr	40	29 - 64
Period in practice, yr	9	2 - 29
Time spent in outpatient department, h/wk	3	3 - 9
Time spent in private practice, h/wk	8	5 - 37
No. of private practice patients seen in preceding week	23	8 - 88
No. of private practice patients seen per hour	2.2	1.4 - 6.7
Practice as subspecialty,* %	65	20 - 100
New patients as referrals,* %	50	10 - 100

\*Asked of only eight subspecialists.

Table II—Differences in four major variables between outpatient department and private practice patients\* (mean values)

Variable	OPD† (n = 60)	PP† (n = 60)	Univariate probability
Age, yr	55.3	45.5	0.003
Degree of activity, range 0 (death) to 406 (optimal health for 2 wk)	338.1	370.5	0.014
Patient report of no. of ambulatory visits in previous 12 mo	8.4	5.5	0.050
Socioeconomic status, range 0 (lowest) to 6 (highest)	3.2	4.7	0.000

\*Multiple analysis of variance criteria for the hypothesis of no overall group effect showed Wilk's criterion  $\Lambda = 0.789$ ,  $P < 0.05$ .

†OPD = outpatient department; PP = private practice.

showed few differences. The two groups were generally similar with respect to the type of transportation used to reach the physician, the mean duration of the trip from home to physician (a little longer than 30 minutes) and the frequency of a variety of logistic obstacles to keeping appointments. These obstacles in-

cluded such items as inclement weather and inability to leave one's job or to leave a family member unattended at home. Private practice patients were more likely to use their automobiles to come to the physician than were outpatients (57% v. 22%). A larger percentage of outpatients considered themselves sometimes "too

sick" to come to the physician (12% v. 0%).

We also compared the two groups with respect to health care utilization by means of medical record review and patient interview. Although the number of hospitalizations was similar (19 for the outpatient group and 17 for the private practice group), there were several major differences (Table IV). The average hospital stay was more than twice as long for outpatients as for private practice patients. The interval between visits to the physician was shorter and the frequency of visits, both to the internist and to all other physicians, was greater for the outpatient group. While 44 of the 60 hospital outpatients mentioned that their last visit to the physician had been for the care of chronic disease, only 24 of the 60 private practice patients noted this. More outpatients than private practice patients visited dietitians, but otherwise the two groups were similar with respect to use of other health care professionals in the preceding 12 months, use of emergency room or other medical services in the preceding 2 weeks and relative frequency of use of the "index" internist as a primary physician.

To assess attitude we asked patients whether they agreed with seven statements selected from validated published scales as most likely to reflect patient satisfaction<sup>7</sup> and hypochondriasis.<sup>8</sup> Table V shows that the outpatients tended to be more anxious about their health and more sceptical of physicians' good intentions, yet more dependent on physicians than private practice patients.

Finally, we compared the patients' degree of activity,<sup>9</sup> physical or sensory deficits, active medical condition and lists of prescribed medications to assess current medical status. The two groups were remarkably similar with respect to the ambulatory, self-care and employability components of activity as well as the absence of major deficits, but they differed in the composite degree of activity as part of the multiple analysis of variance and even more strikingly in major diagnoses (Table VI). Although the number of patient visits we sampled was relatively small, the outpatient group seemed disproportionately affected by hypertension and ischemic heart disease, compared with the private practice group and United

Table III—Differences in socioeconomic status

Socioeconomic variable	OPD, % (n = 60)	PP, % (n = 60)	P value (chi-square test)
Patients retired, disabled, unemployed or laid off	50	18	0.002
Patients having completed grade 8 education or lower	55	10	0.000
Patients with household earnings < \$7000/yr before taxes	60	18	0.000

Table IV—Differences in utilization of medical services (mean values)

Assessment method and variable	OPD (n = 60)	PP (n = 60)
<b>Patient interview</b>		
Length of hospital stay, d	20.9	9.6
Interval since last physician visit, wk	9.1	15.4
No. of all ambulatory physician visits in preceding 12 mo	8.4	5.5
<b>Medical record review</b>		
No. of ambulatory visits to index internist in preceding 12 mo	2.0	1.4
No. of all ambulatory visits to index internist	7.0	5.8
Interval between visits to index internist in preceding 12 mo, wk	15.0	16.1

Table V—Differences in attitude

Statement	Patients agreeing, %		P value (chi-square test)
	OPD (n = 60)	PP (n = 60)	
Doctors can help both in sickness and in health.	82	97	0.029
It's hard for me to believe the doctor when he tells me there is nothing to worry about.	42	15	0.002
Doctors control my health more than I do.	52	27	0.009
I worry about my health more than other people.	47	18	0.002
I have many aches and pains.	48	32	0.094
It's easier to go to the drugstore for medicine than to bother with a doctor.	32	25	0.543
Doctors will not admit it when they do not know what is wrong with a patient.	28	22	0.598

Table VI—Most frequent principal diagnoses or reasons for visit to physician

Diagnosis	% of internist office visits		
	OPD (n = 60)	PP (n = 60)	NAMCS*
Essential hypertension	28.3	15.0	9.9
Ischemic heart disease	20.0	8.3	7.9
Diabetes mellitus	0.0	0.0	4.5
Medical or special examination	0.0	5.0	3.7
Neurosis	5.0	5.0	2.6
Osteoarthritis or related condition	5.0	6.7	1.8

\*National Ambulatory Medical Care Survey, National Center for Health Statistics, Department of Health, Education, and Welfare, Washington, May 1976.<sup>10</sup>

States national patterns for patients of internists.<sup>10</sup> The mean number of major active conditions diagnosed was 2.02 for hospital outpatients, compared with 1.68 for private practice patients (Student's *t*-test, *P* = 0.08). Comparison of medications prescribed reflected the major diagnoses by a preponderance of cardiovascular, diuretic and potassium supplement preparations for outpatients. In addition, outpatients received a mean of 2.08 prescribed medications, compared with only 1.37 for private practice patients, during the sampled visits (Student's *t*-test, *P* = 0.02).

The major differences we observed between the two groups are summarized in Table VII.

### Discussion

In evaluating these results we should first consider the methods used in the study. By having the internists act as their own controls we minimized the effect of interphysician variability.<sup>11</sup> The use of Canadian practice settings reduced financial considerations, since universal health insurance makes physician visits "free" for all Canadian citizens and landed immigrants.<sup>12</sup> These two potentially confounding variables have been major problems in past studies comparing patients in different health care settings.

The data obtained from this study support the hypothesis that major differences exist between patients seen in the outpatient department and those seen in private practice. Most threats to the internal validity of this study were avoided because the data were gathered over a short period and the percentage of patient response was high. Unfortunately the small sample size, the short period of data collection and the choice of academically affiliated physicians raise doubts about the general application of the results. It is reassuring that the differences we observed are consistent with previously published profiles of patient groups analysed independently in the two settings.<sup>13,14</sup> The Canadian patient groups do not reflect the ethnic and racial composition usually seen in practice settings in the United States. Indeed, such a study would have been almost impossible in the United States, with its predominantly out-of-pocket, fee-for-service system and where a distinct, perhaps atypical, minority receives prepaid or com-

pletely subsidized medical care. Moreover, the smaller proportion of general practitioners in the United States would incline subspecialty internists to function more commonly as primary care physicians than is the case in Canada.<sup>15</sup> Yet our study tested and validated the hypothesis that socially and economically disadvantaged groups predominate in the outpatient department. These differences are slowly becoming less noticeable since the institution of national health insurance but are by no means disappearing rapidly.<sup>16,17</sup> With the methods used in this study we cannot pretend to link patient profile and health behaviour, since not all disadvantaged patients go to outpatient departments and not all hospital outpatients are disadvantaged. Moreover, we did not attempt to explain why individual patients choose or maintain relations with outpatient departments rather than private practices. We wanted merely to describe the characteristics of two groups of patients attending the same physician in a different milieu, uninfluenced by financial constraints, and to consider implications of the observed differences.

The hospital outpatient profile that has emerged is distinct. Generally these patients are older and more chronically ill than the private practice patients. Their activities are more restricted and they are less likely to be gainfully employed. Their lower socioeconomic status is associated with greater dependence on public transportation, which complicates their more frequent visits to the physician. They express greater distrust of, yet greater dependence on, physicians and have an apparent tendency to anxiety. Their facility in communication with the physician is less. Finally, they confront their physicians with predominantly chronic, degenerative conditions, especially hypertension and ischemic heart disease.

Health care professionals who have

worked in university hospital outpatient departments will undoubtedly be familiar with the pattern described. Yet the study was not designed to document the obvious. Its purpose was to highlight the differences in patients that might make outpatient department practice more difficult than private practice. The difficulties reflect the burden on the outpatient department of treating a larger proportion of patients with chronic disease compounded by their increased anxiety, scepticism and dependence in a setting of more limited activity, education and socioeconomic options. Faced with such a patient, a physician working in an outpatient department may require unusual amounts of patience and skill to fashion a management scheme acceptable and accessible to the patient. The outpatient department administrator, in turn, must learn to expect greater demands on his staff, a reduction in numbers of patients seen and, ultimately, higher operating costs if hospital outpatients are to receive all the services they need. The medical educator in the outpatient department must prepare medical students and house officers more specifically to identify, evaluate and manage nonorganic as well as organic problems, and must select faculty members prepared and motivated to serve in both spheres. Health care research workers, striving to elucidate future practice or policy issues, must first confirm that their study population is similar to the groups to which they wish to extend their conclusions.

All individuals, including providers of health care, administrators, educators and research workers, who have previously assumed that hospital outpatients and private practice patients are comparable must re-evaluate their practices. Hospital outpatients may have more complex and demanding clinical and socioeconomic problems than other ambulatory care groups. While these differences can neither

Table VII—Summary of hospital outpatient characteristics as they differ from those of private practice patients

Older	More with chronic disease
More speaking French	More frequent physician and dietitian visits
More not employed	More "too sick" to come
More with limited education	More dependent, sceptical and anxious
More with limited income	More with hypertension and ischemic heart disease
Fewer using private transportation	More taking prescribed medication
Lower degree of activity	
Longer hospitalization	

completely explain nor excuse suggestions of inadequate care in the outpatient department they do indicate another dimension to be considered in providing, teaching or evaluating optimal services. Future research must explore the specific effect of patient differences in other settings. These might include the practices of physicians other than internists, countries other than Canada and facilities other than outpatient departments. The exact role of these differences in determining the degree of difficulty in serving patients or the quality of care remains to be defined.

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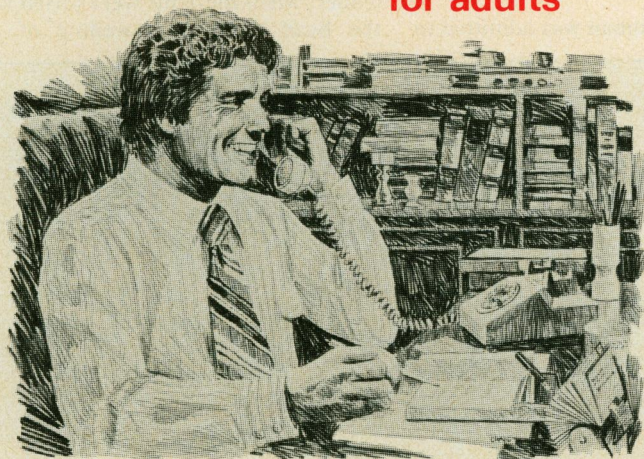
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