JDC-BROOKDALE INSTITUTE
OF GERONTOLOGY AND HUMAN DEVELOPMENT

Allocation of Time among Primary Care Physicians in Israel

Mark Taragin • Revital Gross • Dan Yuval

Research Report

This report was prepared in the framework of the Cooperative Program in Health Policy Research of the Government of Israel and the JDC-Brookdale Institute

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Executive Summary

The relative importance of primary care is increasing. The primary care physician supplies acute care services, preventive health services and refers patients to various other suppliers of health services. The many changes occurring in the Israeli health care system necessitate a better understanding of the primary care physician's work activities.

In 1993, the JDC-Brookdale Institute participated in an international study assessing primary care physicians' work activities. A random sample of 677 Israeli physicians completed self-administered questionnaires which examined physician demographics, satisfaction, work environment, patient population and services provided. In a special diary, physicians also logged their work activities during a typical week.

This report focuses on the total amount of time the physicians spent in professional activities, and the specific activities they performed. It also discusses the average time physicians spent with a patient. These issues were chosen for a number of reasons, among them the desire to evaluate access to and quality of care.

Total Hours Worked and Their Distribution Across Types of Activity

Part of the Israeli public is dissatisfied with the availability of primary care physicians. The perceived lack of availability can mean that patients have unreasonable expectations, that physicians do not work enough clinical hours, or that physicians work at inconvenient hours. Our results demonstrate that physicians work an average of 50.4 hours a week. Ten percent of physicians work fewer than 30 hours a week, and 25% of physicians work more than 60 hours a week. Their primary activities include clinic treatment (29.5 hours), home care (3.1 hours), administrative duties (1.5 hours), and teaching and research (2.9 hours). This suggests that the dissatisfaction with the availability of primary care physicians is not due primarily to an overall shortage of clinical hours.

We also explored the relationship between physician characteristics and these results. For example, physicians who are older or women work fewer total hours than their colleagues. However, the pattern of these differences is not simple. For example, both men and women physicians provide the same number of hours of clinic treatment, but women physicians work fewer non-clinic hours. Sick fund affiliation and being compensated as either an independent or salaried physician also affect total hours and type of work. Our results thus portray how physician characteristics affect who provides specific services such as clinic treatment and home care, and who teaches, engages in research and attends to administrative duties.

Average Time Spent Per Patient

Previous research in other countries has demonstrated that the amount of time a physician spends with a patient affects measures of quality of care, such as satisfaction, and prescription and referral rates. Our data allowed us to explore the differences in consultation length, if any, that occur due to organizational diversity such as sick fund affiliation, field of specialization

and whether a physician is independent or salaried. Our study found that the median number of minutes spent with each patient is 10.5. Here, too, we found that the time spent per patient was influenced by various physician characteristics. For example, independent physicians average approximately 20% more time per patient than do salaried physicians.

The information on all three variables studied - total amount of time worked, the distribution of time across types of activities, and time spent per patient - will be useful in making some of the many decisions facing patients, physicians, sick funds and Israel's Ministry of Health. For example, patients who want to spend more time with their physician may do better with an independent practitioner. Sick funds may wish to understand whether specialists in family medicine perform different activities than do general practitioners, in order to predict the amount and type of services they will receive. The Ministry of Health may wish to evaluate the quality of care provided by physicians who spend significantly shorter amounts of time, on average, with each patient. Further, the current average time per patient is not conducive to the expansion of preventive health services which the Ministry desires. Information on total hours worked should be an important input for policymakers involved in physician manpower planning, as the number of physicians needed in the future is in part a function of how much time each physician works.

This paper represents an initial attempt to portray the activities of the primary care physician. The results of this study can influence reimbursement strategies, quality improvement programs, and long-range manpower planning. When they become available, the results of the larger NIVEL study will facilitate comparisons with the situation in other countries. Moreover, the results of this study may contribute to evaluation of the impact of the new National Health Insurance Law on physician work load and consultation length.

Acknowledgments

We would like to thank all the primary care physicians who made this study possible by taking the time to complete the questionnaire.

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Introduction

In Israel, as in many Western countries, recognition of the importance of primary care services in the health care system is growing. The State Commission of Inquiry into the Functioning and Efficiency of the Health Care System in Israel, established in 1988 to consider reform of the health system, concluded that primary care must be expanded and utilized to "prevent the multiplication of services and superfluous expenses" (State Commission of Inquiry 1992). Similarly, primary care is considered an important tool for achieving the World Health Organization (WHO) goals of health care for all (World Health Organization 1980).

There are many reasons why primary care is important. The primary care physician provides the general population with basic health care services. Aside from providing acute care, he or she provides preventive care, for example by screening for hypertension, diabetes or cancer. Further, the patient typically first has contact with a primary care physician, who determines the necessity of hospitalization, referral to a specialist or additional testing (e.g., laboratory or radiology tests). In many countries, primary care physicians are being encouraged to act as so-called "gatekeepers": that is, to control access to health care services by being selective in their decisionmaking and cognizant of the cost of care.

In 1992, the Netherlands Institute of Primary Care (NIVEL) initiated an international comparative study of the activities of primary care physicians. In Israel, this study was carried out by the JDC-Brookdale Institute. Using self-administered questionnaires, information was collected about physicians' demographic characteristics, satisfaction, work environment and patient population, as well as about the services they provide. Physicians were asked to log their work activities in a diary during a typical week. A previous paper describes the preliminary findings of this study (Gross et al. 1994). The present report will describe how the diary was used to explore in depth three important issues: how many hours a physician works; how physicians allocate their time; and how much time physicians spend with a patient.

As the new National Health Insurance Law, which went into effect on January 1, 1995, is changing how sick funds are being reimbursed, the sick funds may re-examine how they, in turn, reimburse the physicians affiliated with them. How many hours a physician works, what he does, and how much time he spends with a patient are all likely to be considered when the sick funds shape new compensation schemes.

Information on work activities and work hours may also shed light on another "Israeli" problem: lack of physician availability. The public perceives that physicians are not available (Gross and Boussidan 1992). It will be necessary to determine whether there is an adequate supply of physicians, how hard they are working, and what sort of work they are doing.

Information on the work hours and work activities of primary care physicians is also needed to plan for future manpower needs. Increasing emphasis on quality of care and preventive medicine will increase the amount of time a physician is required to spend with each patient. The increase in outpatient care -- partly a result of the aging of the population -- is likely to further increase the demand for primary care physicians, and to require them to spend more time on certain types of activity, such as home care.

A Review of the Literature

Many different countries, often with different health care systems, have begun to assess physician activities. As a result, a theoretical model of primary care medicine has evolved (see Figure 1) (Groenewegen and Hutten 1991). This model incorporates patient factors, such as the demographic characteristics and health status of the patient population, and physician factors, such as demographic characteristics, practice organization, work load and work style; it also examines the effect of each factor on the others. Following is a review of the literature describing these factors and their complex inter-relationship; special emphasis is given work style and work load, and their relationship to quality of care.

Patient list size refers to the number of patients for whom a physician is responsible. Studies indicate that there is a positive correlation between patient list size and number of hours worked (Calnan and Butler 1988; Wilkin et al. 1986) and a negative correlation between patient list size and duration of consultation (Calnan and Butler 1988; Wilkin et al. 1986; Knight 1987; Flemming 1987; Armstrong and Griffin 1987). It should be noted that since new patients require more of a physician's time, a high turnover rate can increase work load.

Patient characteristics include demographic and health characteristics such as age, gender and health status. Marsh and McNay (1974) have demonstrated that certain patient characteristics affect work load. For example, women, elderly people and young children visit physicians more frequently than do others, and require more home visits; unemployed patients tend to utilize physician services more than do employed, and among employed patients, those of higher social class tend to visit their physician more often.

Studies have shown that patient characteristics can also affect consultation length. Morrell et al. (1986) found that patients who are older, of a higher social class, or who present a new health problem increase consultation length. Westcott (1977) found no difference between men and women in consultation length, but Verhaak's (1986) videotape study found that consultations with women patients are longer.

Physician characteristics are personal characteristics that influence the provision of care. For example, studies show that consultation length is greater for older than younger physicians (Buchan and Richardson 1973; Pringle and Stewart-Evans 1990) and for women than men

physicians (Eimerl and Pearson 1966; Gray 1987). Physicians who are satisfied with their work, have a positive attitude toward general practice and an interest in mental health were also found to spend more time in consultation Mechanic 1968; Raynes and Cairns 1980). Calnan and Butler (1988) observed that physicians with a "medical orientation" have a higher total work load and shorter consultation times than do "socially-oriented" physicians. Also, a study conducted in the United States demonstrated that men physicians were three times as likely to be in the highest malpractice claims category as were women physicians, despite adjusting for multiple factors such as specialty and total work hours (Taragin et al. 1992)

Practice organization refers to the structure of health care provision. Whether a physician is in a solo or a group practice, whether he works independently or in a clinic, whether he uses an appointment system, and whether he receives support services from secretaries or nurses all greatly influence the provision of care. For example, physicians who are pre-paid tend to react to a large patient list by keeping constant the total number of hours worked and by reducing the amount of time spent with each patient. In contrast, physicians who are paid fees-for-service often extend their work hours (Mechanic 1968). In Israel, one would expect that a large degree of organizational variation would be attributable to the work patterns and norms of the sick fund with which a physician is affiliated. Regardless of his affiliation, however, the work load of both independent and clinic physicians is likely to be influenced by the incentive to see a large number of patients.

Work load can be defined and measured in many different ways. Two of its main components are the amount of time a given activity consumes, and the frequency with which a given activity is performed (Groenewegen and Hutten 1991). As noted above, work load is influenced by the size of the patient list, the characteristics of the patient population and the organization of the practice. For example, as list size increases, the rate of home visits may decline (Calnan and Butler 1988). In turn, physician work load has been shown to affect prescription rates, communication habits, the frequency of referrals and repeat visits, health education and prevention, patient satisfaction, and, ultimately, the quality of care.

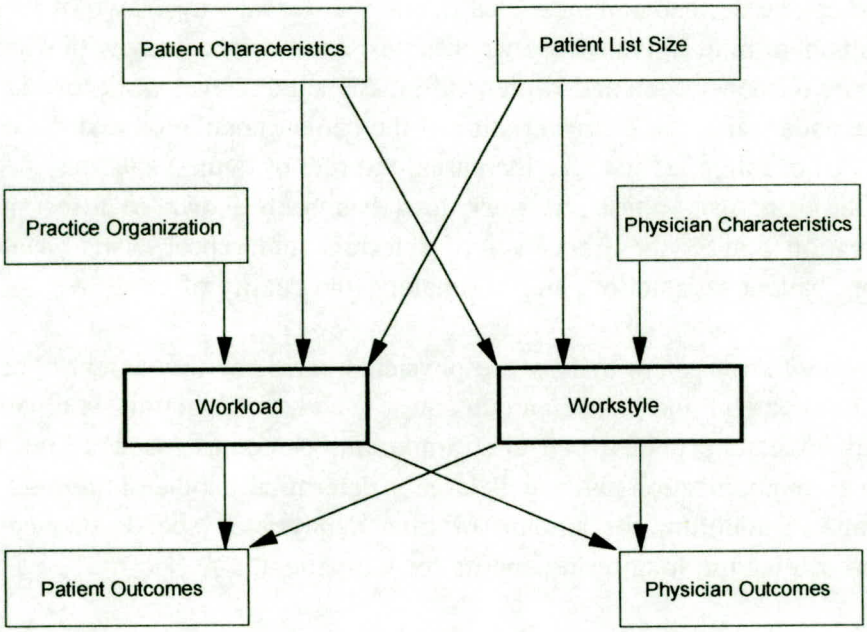
Physician work style refers to how the physician cares for the patient. The direct impact of work style on patient and physician outcomes, such as satisfaction, is obvious. For example, the quality of care provided can alter important outcomes, such as mortality. Further, a physician's communication skills will largely determine another important outcome: patient satisfaction. In addition, the amount of time a physician spends on health education and prevention can lead to long-term benefits for the patient.

A number of studies have explored the relationship between consultation length and quality of care. Buchan and Richardson (1973) compared a group of nine "quick" physicians, whose mean consultation length was 4.1 minutes, with a group of 11 "slower" physicians, whose mean consultation length was 5.3 minutes, and found that each component of care was covered more

quickly by physicians in the former group. Hughes (1983) compared two group practices and found that the one with longer consultation times prescribed fewer medications and had fewer patient- and physician-initiated repeat visits. Morrell et al. (1986), Roland et al. (1986) and Ridsdale et al. (1989) compared outcomes in a practice where patients were given appointments at 15-minute intervals (mean consultation length was 9.2 minutes) and a practice where patients were given appointments at 10-minute intervals (mean consultation length was 7.4 minutes). They found that physicians with longer consultations devoted more time to conversation and discussion of health education and prevention. Physicians who spent more time with their patients were more likely to measure blood pressure or perform internal gynecological examinations.

Physicians' work styles are influenced by their work load (Groenewegen and Hutten 1991). For example, a heavy work load can cause some physicians to take steps to keep consultations short, such as suggesting a patient return for care at some other time, making a referral to a specialist or prescribing medication. The latter is especially prevalent in Israel, where physicians have relatively high prescription rates (Shuval 1992). It seems that a physician will adapt his work style to cope with a busy schedule.

Figure 1: A Theoretical Model of Factors Influencing Patient and Physician Outcomes



In summary, the literature demonstrates that patient list size, patient characteristics, physician characteristics, and practice organization influence work style and work load. To a varying degree, these two factors strongly influence numerous patient and physician outcomes, as will be discussed below.

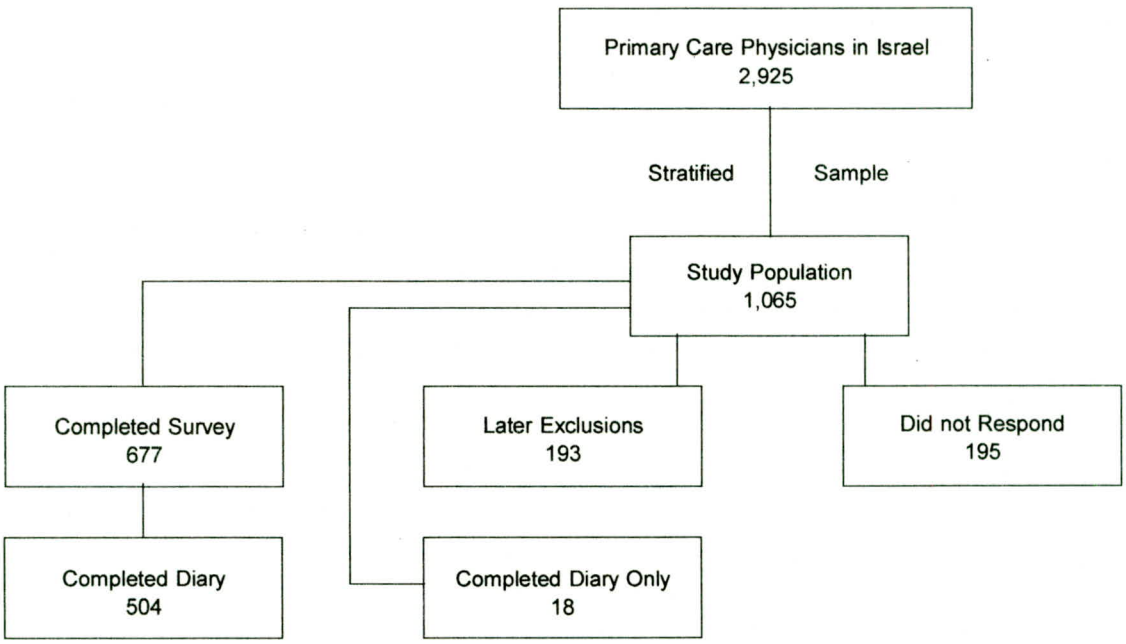
Methodology

Study Population

The study population consisted of primary care physicians affiliated with one of Israel's four sick funds. In accordance with the stipulations of the NIVEL Institute, which coordinated the international study, only primary care physicians who see a variety of patients and conditions were included (WONCA 1991). Thus, although they are often defined as being primary caregivers, pediatricians, gynecologists and ophthalmologists were excluded.

A list of primary care physicians -- 2,925 in all -- was obtained from the sick funds. After stratification by sick fund (affiliated only with Kupat Holim Clalit (KHC), or not)[1] and field of specialization (specializes in family medicine, or not), 1,065 physicians were randomly chosen (see Figure 2). Both family physicians and physicians affiliated with sick funds other

Figure 2: The Study Population: Inclusions and Exclusions



1 Kupat Holim Clalit, the Sick Fund of the General Federation of Labor, is the largest of Israel's four sick funds.

than KHC were over-sampled in order to generate a sufficient number of cases for comparison between the groups. Each case was weighted according to the probability of the sample, as defined by *a priori* categorizations provided by each sick fund. The degree of compliance between the *a priori* classification and the classification reported by respondents was high. For example, classification according to sick funds was correct 92.1% of the time.

The Survey

The survey used was that prepared by the NIVEL Institute, translated into Hebrew and with the addition of questions relevant to the situation in Israel. The survey, available from the authors, had two components: a self-administered questionnaire and a personal diary. The questionnaire included questions that assessed physicians' demographic characteristics, working conditions, clinical activities and satisfaction. The diary comprised a log of weekly activities, in which physicians were asked to explain how they divided their work time, e.g., among clinic treatment, home care, administrative duties, and teaching and research (see Appendix I).

Data Collection

Questionnaires were returned to the JDC-Brookdale Institute through the mail between March and August 1993. In order to achieve maximal response rates, each questionnaire was marked by an identifying number; this enabled us to follow up questionnaires that were not returned. Telephone calls were made and questionnaires mailed a second time when necessary.

Response Rate

Of the original 1,065 physicians in the sample, 193 physicians were excluded because they were specialists, had retired or had died. Of the 872 remaining physicians, 677 (77.6%) returned the questionnaires, 504 of whom completed the diary in an interpretable fashion. Eighteen physicians returned a diary but no questionnaire. Almost all of the physicians who did not respond were contacted by telephone: they either refused to participate in the study (9%); claimed they had responded even though their questionnaire had not been received (7%); or gave other, vague reasons (6%). The rate of response was higher among specialists in family medicine (85%) than among general practitioners (72%), and higher among salaried physicians (80%) than independent physicians (71%). There was no significant association between response rate and gender or sick fund affiliation.

The characteristics of the physicians who responded to the survey, and a comparison of the characteristics of those who completed both the questionnaire and the diary and those who completed only the questionnaire are presented in Table 1. The physicians surveyed had a median age of 50 and worked a median of 48 hours per week; 65% of them were men and 63% of them were salaried only; 51% were specialists in family medicine and 70% worked for KHC only. The demographic characteristics of those who completed the diary were similar to those of the physicians who did not.

Table 1: Physician Response to Survey, by Demographic Characteristics (in %)

	Respondents* (N=504)	Non-Respondents* (N=173)	Total (N=677)
Age (median)	50	50	50
30-44	57	57	57
45-64	35	34	35
65+	8	9	8
Gender			
Men	65	58	63
Salary			
Salaried	63	63	63
Independent	19	17	19
Both	18	20	19
Total Hours per Week (median)	48	46	48
0-45	41	47	42
46-59	36	31	35
60+	23	22	23
Specialist in Family Medicine	51	45	47
Sick Fund Affiliation			
KHC	70	65	69
Other	30	35	31

* For the purposes of this study, "respondents" refers to those who completed both the questionnaire and the diary, and "non-respondents" refers to those who completed only the questionnaire.

Note: All comparisons between respondents and non-respondents were not statistically significant at $p < 0.05$

In our efforts to determine how work load and work style affect primary care, we chose to focus on the respondents' work hours, work activities, and consultation length. *Work hours* were calculated as the sum of the hours spent performing any activities described as work (e.g., clinic treatment, home care; see Appendix I). Work performed between the hours of 10 p.m. and 7 a.m. was not included, as we could not ascertain from the diary what percent of this nine-hour time span was devoted to work.

Work activities represented the time a physician reported spending on a given activity (the number of hours and percent of total time). One of the categories of work activity in the survey was "other". Theoretically, this could have meant leisure time or work activities not otherwise listed. A number of analyses led us to include "other" as work hours. A more extensive discussion of this issue can be found in Appendix II.

Consultation length -- the amount of time a physician spends with a patient -- was estimated by combining information from two sources. In the questionnaire, physicians estimated the average number of patients they saw per day. In the diary, physicians entered the number of hours during which they provided clinical services. The number of minutes a physician spent with each patient was calculated by dividing the number of minutes of clinical service by the number of patient contacts per day. Since the number of hours per day was not normally distributed (despite excluding Fridays and Saturdays), we assessed whether using the mean or the mode would affect the results; the results were similar: Values reported represent the use of the mode.

The following are the independent variables we assessed: age, gender, salary type (salaried and/or independent), specialization (family medicine or not, i.e. general practitioners and specialists not practicing in their area of specialization), patient list and sick fund affiliation (KHC only, or other). (Due to small sample size, "other" was not broken down by sick fund.)

Validity

The strengths and weaknesses of survey research are well known. One advantage of a survey is that a large population can be sampled in a relatively efficient manner. However, surveys have a number of limitations. Questions may be misunderstood or misinterpreted. The respondent, in this case a physician, is likely to be unable to exclude his biases when answering questions requiring use of judgement or interpretation. Out of the respondent's ignorance, answers may be factually incorrect. However, one can lessen these concerns through a variety of methods. For example, one can pre-test and then reformulate questions to decrease the likelihood of misunderstanding (as was done by NIVEL). As is demonstrated below, questions of fact can be validated by both external and internal sources of information.

Another way of checking validity is to assess the consistency of the survey results (Gross et al. 1994). To this end, we compared the information recorded in the diaries with responses to the questionnaire. For example, according to the questionnaires, the physicians worked an average of 50 hours per week, whereas according to the diary, they worked an average of 50.4 hours per week (including overnight work). We also divided total hours of work per week into three groups: 0-45 hours, 46-59 hours, and 60+ hours according to the questionnaires; average work hours per week, according to the diaries, were 45.5, 52.6 and 57.1. This would indicate a reasonable degree of consistency in the results, and hence of validity of the responses.

We also used various approaches to verify the accuracy of our calculations. To check our calculation of how many hours per week a physician spends in the clinic, we performed a number of sub-analyses controlling for sick fund affiliation, number of places of work and method of compensation. For example a salaried physician who is affiliated only with KHC, works in the clinic an average of 30 hours per week. This has face validity, as it is consistent with KHC-physician contracts (Gross et al. 1994). Clinic hours were also used to estimate consultation length; the results were consistent with those reported in the literature, as well as with those reported in the questionnaires.

Findings

In a typical week, a primary care physician works an average of 50.4 hours, of which 29.5 hours (58.6%) are spent on clinic treatment and 3.1 hours (6.1%) on home care (see Table 2). Ten percent of physicians work fewer than 30 hours per week, and 25% of physicians work more than 60 hours per week.

Table 2: Physicians' Weekly Work Hours, by Activity

Activity	Time Spent (in %)	Hours
Clinic Treatment	58.6	29.5
Home Care	6.1	3.1
Hospital Care	2.1	1.1
Emergencies	3.4	1.7
Mother and Child Care	0.3	0.1
Travel	3.3	1.7
Meetings	2.8	1.4
Administration	3.0	1.5
Teaching/Research	5.8	2.9
Other	14.5	7.3
Total	100	50.4

We examined the relationship between physician characteristics, and both how many hours they worked and how they divide their time. For example, we found that men work an average of 52.4 hours per week, while women work an average of 48.2 hours per week (see Table 3). Half of this difference can be explained by "other" activities, which men are involved in. The diaries revealed that age influences both the total number of hours physicians work and how

they divide their time. Physicians aged 30-44 reported working an average of 53.2 hours per week, while those aged 45-64 reported working an average of 51.3 hours per week, and those aged 65 or over reported working an average of 33.5 hours per week (See Table 4). It appears that as physicians age they devote less time to emergencies. Physicians aged 65 and over devote less time to teaching and research and clinic treatment, though the latter consumes a proportionally large amount of their total work time.

Table 3: Physicians' Weekly Work Hours, by Activity and Gender

Activity	Men		Women	
	Time Spent (in %)	Hours	Time Spent (in %)	Hours
Clinic Treatment*	57.0	29.9	60.4	29.1
Home Care*	5.5	2.9	6.4	3.1
Hospital Care*	1.9	1.0	2.6	1.3
Emergencies*	3.9	2.0	3.4	1.7
Mother and Child Care*	0.5	0.3	0.4	0.2
Travel*	3.4	1.8	3.3	1.6
Meetings**	2.6	1.4	3.7	1.8
Administration*	4.2	2.2	3.0	1.4
Teaching/Research*	7.2	3.8	6.1	2.9
Other*	13.7	7.2	10.8	5.2
Total***	100	52.4	100	48.2

* = Not significant
** = $p < 0.05$
*** = $p < 0.01$

Table 4: Physicians' Weekly Work Hours, By Activity and Age

	Aged 30-44		Aged 45-64		Aged 65+	
	Time Spent (in %)	Hours	Time Spent (in %)	Hours	Time Spent (in %)	Hours
Clinic Treatment***	58.0	30.9	56.8	29.1	67.9	22.8
Home Care*	5.1	2.7	6.5	3.3	8.8	2.9
Hospital Care*	2.2	1.2	2.1	1.1	2.7	0.9
Emergencies**	4.6	2.4	2.8	1.4	0.3	0.1
Mother and Child Care*	0.6	0.3	0.3	0.2	0.0	0.0
Travel**	3.2	1.7	3.8	2.0	1.5	0.5
Meetings*	3.1	1.7	2.8	1.5	2.5	0.9
Administration*	3.2	1.7	4.7	2.4	4.4	1.5
Teaching/Research***	7.2	3.8	6.8	3.5	3.6	1.2
Other*	12.8	6.8	13.4	6.9	8.2	2.8
Total***	100	53.2	100	51.3	100	33.5

* = Not significant
** = $p < 0.05$
*** = $p < 0.01$

We compared how specialists in family medicine and general practitioners spend their time. We found that specialists in family medicine work an average of 50.5 hours per week, while their general practitioner colleagues work an average of 50.4 hours per week (see Table 5). Specialists spend more time on administrative duties and teaching, while general practitioners spend more time on "other" duties.

Table 5: Physicians' Weekly Work Hours, by Field of Specialization

Activity	Specialist in Family Medicine		General Practitioner	
	Time Spent (in %)	Hours	Time Spent (in %)	Hours
Clinic Treatment*	58.4	29.5	58.4	29.4
Home Care*	5.2	2.7	6.1	3.1
Hospital Care*	2.2	1.1	1.7	0.9
Emergencies*	3.9	2.0	2.6	1.3
Mother and Child Care*	0.7	0.4	0.2	0.1
Travel*	3.3	1.7	3.2	1.6
Meetings*	3.2	1.6	2.5	1.3
Administration**	5.3	2.7	2.9	1.4
Teaching/Research***	8.2	4.1	5.2	2.6
Other***	9.5	4.8	17.3	8.7
Total*	100	50.5	100	50.4

* = Not significant
** = $p < 0.05$
*** = $p < 0.01$

How a physician divides his time is also affected by whether he is salaried or works independently. According to the diaries, salaried physicians work an average of 50.5 hours per week, while independent physicians work an average of 48.1 hours per week, and physicians who are both salaried and independent work an average of 54.9 hours per week (see Table 6). Salaried physicians treat the most emergency cases and deal the least with administrative duties. Independent physicians spend the least time teaching and devote the most time to "other" activities and to home care. Physicians who are both salaried and independent spend the most time on clinic treatment. As independent physicians are often older than are salaried physicians (29% of the independent physicians who responded to the survey were aged 65 or over), we performed an analysis stratifying by age which revealed that salaried physicians who are under age 65 work less than do their independent counterparts (see Table 7).

Table 6: Physicians' Weekly Hours, by Activity and Type of Reimbursement

Activity	Salaried		Independent		Both	
	Time Spent (in %)	Hours	Time Spent (in %)	Hours	Time Spent (in %)	Hours
Clinic Treatment***	58.2	29.4	51.5	24.8	63.3	34.7
Home Care**	5.9	3.0	7.3	3.5	4.1	2.2
Hospital Care*	2.2	1.1	2.0	1.0	2.2	1.2
Emergencies***	5.2	2.7	0.7	0.3	1.6	0.9
Mother and Child Care*	0.6	0.3	0.1	0.1	0.4	0.2
Travel*	3.4	1.7	3.3	1.6	3.1	1.7
Meetings*	3.3	1.7	2.4	1.1	2.7	1.5
Administration***	2.7	1.4	5.1	2.5	6.1	3.4
Teaching/Research***	7.4	3.7	4.4	2.1	7.5	4.1
Other***	11.0	5.6	23.2	11.2	9.0	4.9
Total**	100	50.5	100	48.1	100	54.9

* = Not significant
** = $p < 0.05$
*** = $p < 0.01$

Table 7: Physicians' Weekly Hours, by Age and Type of Reimbursement

Age	Salaried	Independent	Both
30-44	51.8	59.3	55.4
45-64	49.3	52.1	55.4
65+	37.4	30.4	47.7

We examined whether a physician's sick fund affiliation affects hours of work or division of time. We compared the data on physicians affiliated only with KHC with that on physicians affiliated with the other sick funds (see Table 8). While physicians in both groups work approximately 51 hours per week, we found small yet important differences in how they divide

their time. For example, physicians affiliated only with KHC spend more than triple the time on emergencies.

Table 8: Physicians' Weekly Hours, by Activity and Sick Fund Affiliation

Activity	KHC Only		Other	
	Time Spent (in %)	Hours	Time Spent (in %)	Hours
Clinic Treatment*	57.3	29.3	60.2	30.3
Home Care*	6.1	3.1	4.9	2.5
Hospital Care*	2.4	1.2	1.7	0.9
Emergencies***	4.7	2.4	1.3	0.7
Mother and Child Care*	0.6	0.3	0.1	0.1
Travel*	3.3	1.7	3.4	1.7
Meetings**	3.3	1.7	2.3	1.2
Administration*	3.7	1.9	4.0	2.0
Teaching/Research*	7.3	3.7	5.9	3.0
Other*	11.3	5.8	16.0	8.0
Total*1	100	51.3	100	51.2

* = Not significant
** = $p < 0.05$

We explored the effect of having more than one position. Physicians who worked at more than one place worked an average of seven more hours per week than did those who worked in one place only (see Table 9). Much of this difference reflects work classified as "other". As expected, physicians with more than one position traveled more.

Table 9: Physicians' Weekly Work Hours, by Activity and Number of Positions

Activity	One Position		More than One Position	
	Time Spent (in %)	Hours	Time Spent (in %)	Hours
Clinic Treatment*	62.1	29.2	55.5	30.1
Home Care*	6.6	3.1	5.2	2.8
Hospital Care*	2.2	1.0	2.2	1.2
Emergencies*	2.8	1.3	4.1	2.2
Mother and Child Care*	0.1	0.3	0.4	0.2
Travel**	2.9	1.4	3.6	2.0
Meetings*	3.1	1.4	2.9	1.6
Administration***	2.7	1.3	4.6	2.5
Teaching/Research*	7.2	3.4	6.8	3.7
Other***	10.1	4.7	14.7	8.0
Total***	100	47.1	100	54.2

* = Not significant
** = $p < 0.05$
*** = $p < 0.01$

Finally, we assessed the influence of list size on work hours. List size had a stronger correlation with work in a clinic than with total work hours. Physicians with a list size of fewer than 1,000 patients had 11 fewer clinic hours than their colleagues with lists of at least 2,000 patients (35.1 hours versus 24.1 hours) (see Table 10).

Table 10: Relationship between List Size and Work Hours

List Size	Total Work Hours	Clinic Hours
< 1,000	46.3	24.1
1,000-1,499	50.5	31.0
1,500-1,999	52.8	28.6
2,000+	52.8	35.1

Given these results, we performed a multivariate analysis describing total work hours and clinic hours. When all of the variables (sick fund affiliation, gender, etc.) were included in the analysis for *total work hours*, 19% of the variance was explained; only age, specialization and number of positions were statistically significant (see Table 11). Thus, according to this analysis, a specialist in family medicine works 6.7 fewer hours than does a general practitioner, while a physician with more than one position works an additional 4.1 hours a week. Gender only barely missed being statistically significant. There was no relationship between list size and total work hours.

Table 11: A Multivariate Analysis of Total Work Hours

Variable	B	SE B	Sig T
Age	-5.4	1.88	.01
45-64			
65+	-21.8	3.16	.01
Specialist in Family Medicine	-6.7	1.99	.01
More than One Position	4.13	2.12	.05
List Size			
1,000-1,499	1.74	2.75	.52
1,500-1,999	2.50	3.01	.41
2,000+	1.56	3.25	.63
Gender	-3.32	1.87	.08
Salaried and Independent	3.11	2.64	.24
Independent	0.88	2.60	.73
Sick Fund Affiliation	- .12	1.96	.95
Number of Daily Consultations	.06	.07	.42
Constant	51.5	5.78	.01

Adjusted $R^2 = 0.19$

In the model for *total clinic hours*, 44% of the variance was explained by the following statistically significant variables: age, specialization, list size, being both salaried and independent, sick fund affiliation and number of daily consultations (see Table 12). According to the analysis, physicians worked fewer clinic hours if they were specialists (2.5 hours) or worked only for KHC (2.5 hours). Conversely, physicians worked more clinic hours if they were both salaried and independent (8.1 hours), and if they had a larger list size (approximately

eight additional hours for each additional 500 patients). In summary, aside for number of positions, where and how a physician works has little influence on his total work hours, but a great deal of influence on his total number of clinic hours.

Table 12: A Multivariate Analysis of Total Clinic Hours

Variable	B	SE B	Sig T
Age 45-64	-2.0	.90	.03
65+	-2.1	1.51	.16
Specialist in Family Medicine	-2.50	0.95	.01
More than One Position	-1.25	1.01	.21
List Size 1,000-1,499	7.39	1.31	.01
1,500-1,999	8.14	1.43	.01
2,000+	9.83	1.55	.01
Gender	0.68	0.89	.44
Salaried and Independent	8.07	1.26	.01
Independent	-2.03	1.24	.10
Sick Fund Affiliation	-2.52	0.93	.01
Number of Daily Consultations	0.14	.04	.01
Constant	22.24	2.75	.01

Adjusted $R^2 = 0.44$

Number of Consultations and Consultation Length

In the questionnaires, physicians described seeing an average of 34 patients in a given day (median 35; see Figure 3). Based on the diaries, physicians devoted a median of six hours a day to clinical activities. According to our calculations, the median time physicians spent with each patient was 10.5 minutes (see Figure 4). Nineteen percent of the physicians spent a median time with each patient of fewer than 7.5 minutes; 82% of them spent a median time of 15 minutes or less with each patient. The relationship between consultation length and physician characteristics is portrayed in Table 13. There was no statistically significant relationship between consultation length and physician age, gender or specialization. Physicians were likely to spend more time per patient if they were either independent, not affiliated with KHC or had small patient lists. After adjusting for type of reimbursement and number of positions by stratification , we found no difference in consultation length according to sick fund affiliation (see Figure 5).

Figure 3: Number of Consultations Per Day

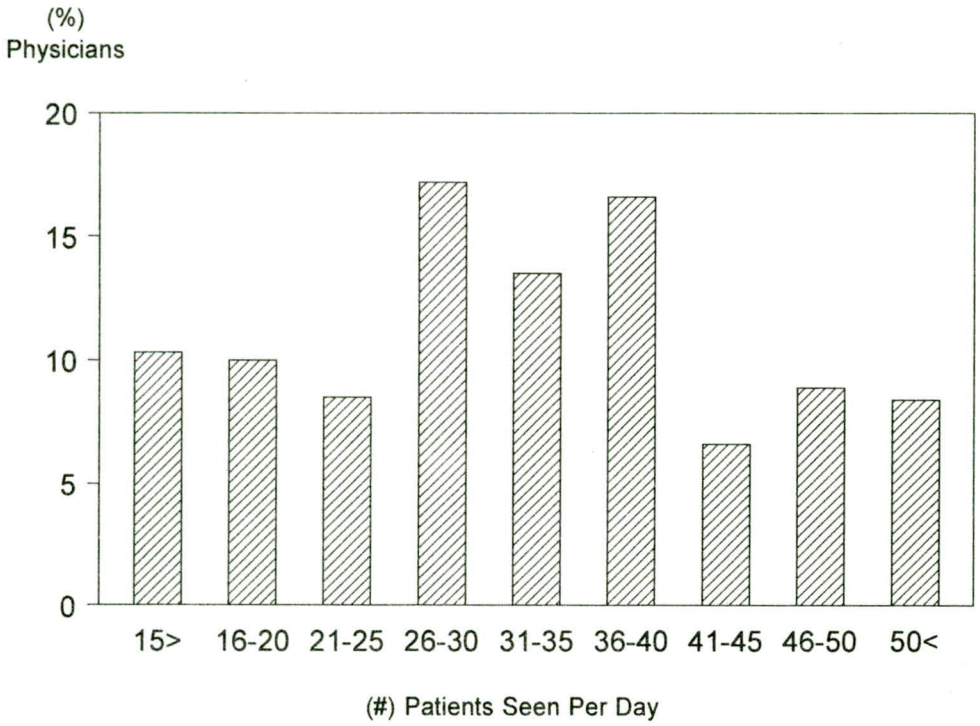


Figure 4: Minutes Per Patient

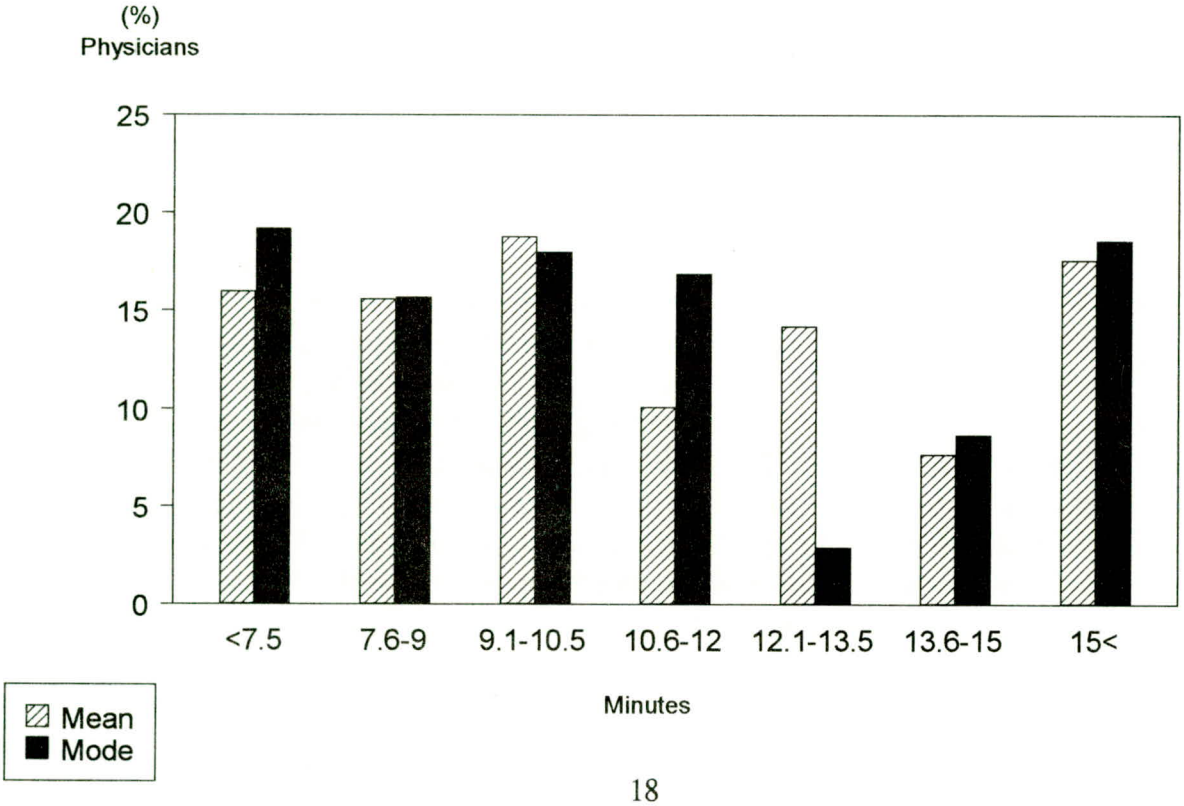
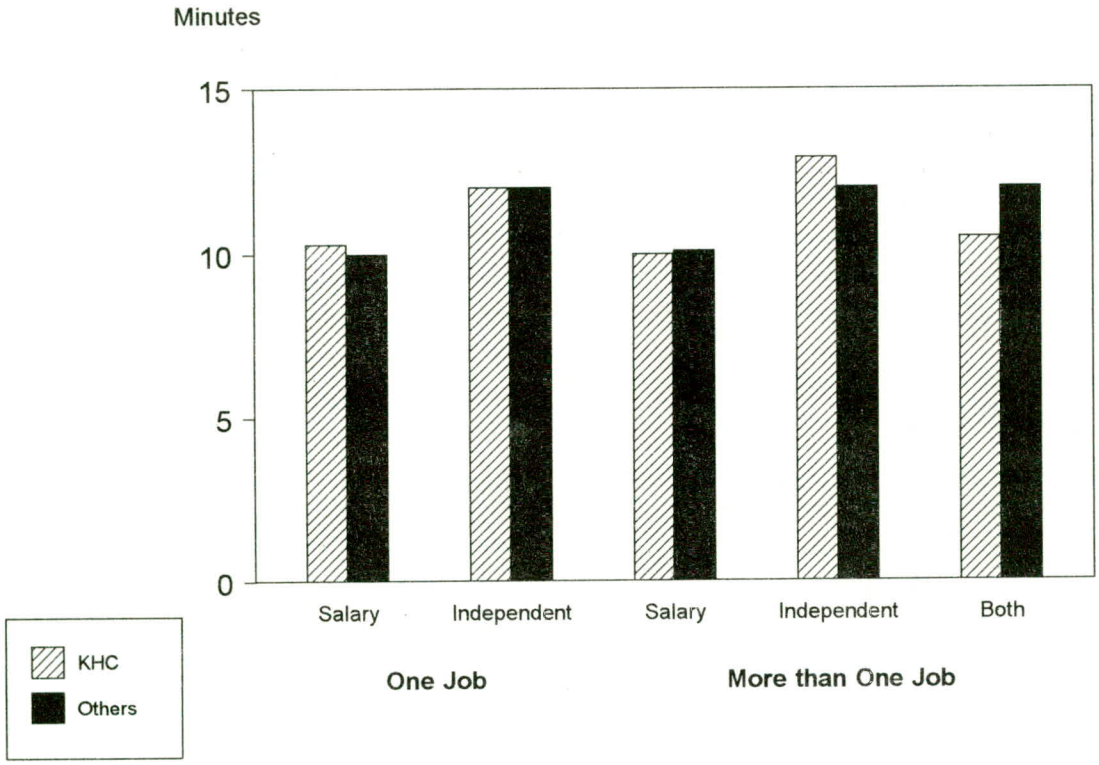


Table 13: Consultation Length, by Physician Characteristics

	Consultation Length (median)
Total	10.5
Age	
30-44 (N=281)	10.5
45-64 (N=172)	10.3
65+ (N=39)	11.3*
Gender	
Men (N=316)	10.7
Women (N=175)	10.3**
Salary	
Salaried (N=307)	10.0
Independent (N=90)	12.0***
Salaried and Independent (N=96)	10.7
Specialization	
Family Medicine (N=215)	10.3
General Practitioner (N=202)	10.5*
List Size	
Under 1,500 (N=241)	13.2
1,500-1,899 (N=146)	10.0
1,900+ (N=106)	9.0***
Sick Fund Affiliation	
KHC Only (N=348)	10.3
Other (N=145)	12.0***

* = not significant
** = p = .051
*** = $p < 0.05$

Figure 5: Minutes Per Patient, By Type of Employment and Sick Fund Affiliation



Discussion

The findings reveal that 90% of primary care physicians work an average of slightly more than 50 hours per week; only 10% of them work fewer than 30 hours per week. Nevertheless, the public appears to be dissatisfied with their availability (Gross and Boussidan 1992). Perhaps this reflects the fact that physicians devote an average of fewer than 30 hours per week to clinic treatment. Patient dissatisfaction may also be a result of inconvenient office hours, excessive waiting times or the brevity of consultations. Since there is no difference in the total clinic hours of physicians who hold more than one position and those who hold only one, the former may work many total hours, yet spend relatively little time at each place of work.

Older physicians and women physicians work fewer total hours than do their colleagues. A likely hypothesis is that these physicians work fewer hours by choice. Importantly, both men and women physicians average the same amount of time in clinic treatment and home care. Thus, from a patient's perspective, their availability may be similar.

Just as the percentage of time a physician devotes to clinic treatment and total hours varies with some of the factors we assessed, so do other specific activities. For example, physicians who are both salaried and independent provide the least home care -- 2.2 hours a week. How much of this represents physician preferences or how home care is compensated, is unknown. Similarly, the amount of time devoted to activities such as teaching and research is influenced by physician age, specialization and type of reimbursement. The results thus portray which physicians are most likely to be involved in a given activity, such as teaching or home care.

We estimated the average amount of time a physician spends per patient as 10.5 minutes. As in most studies of consultation length, the actual time spent with a patient was not measured, but rather was based on self-reports, assumed to be reliable. These results corroborate those of other studies: For example, a study comparing the care provided by independent physicians and clinic physicians revealed that the average amount of time they devoted to a patient was 11.8 and 9.0 minutes, respectively (Yuval et al. 1994).

Our results demonstrate that working independently and having a small patient list are correlated with spending more time with patients. Also, while not attaining statistical significance, our results suggest, as do those of other studies, that older physicians spend more time with patients. These results have a number of implications. As noted, the length of the patient-physician interaction may influence a number of important outcomes, such as patient satisfaction, referral and return visit rates, and overall quality of care. Thus, the "cost" of independent physicians, which includes approximately 20% more time per patient, may yield significant gains. Similarly, the expense of maintaining a small patient list may result in more time per patient and better outcomes, thus ultimately paying for itself.

Originally, this study was undertaken by NIVEL to provide a basis for international comparison. Our findings should be representative of the activities of primary care physicians in Israel. We sampled a representative portion of this study population and garnered an unusually high response rate. When the other countries participating in the NIVEL study have obtained results, Israel will be able to compare its health service delivery to that of theirs. It is hoped this will help us identify areas that need improvement, and work to maintain areas of strength. In addition, these results should provide a basis of comparison as Israel's health system changes.

The results herein can help planners determine how to increase a certain activity, such as home care. In addition, the results should prove useful for guiding health care policy in areas such as manpower planning and reimbursement strategies. For Israel to more accurately estimate its manpower needs, an assessment of the current and expected demand and supply of health care will be needed. Demand represents patients' current and projected needs. Supply reflects the number of physicians, and the amount and type of services they provide. There are good reasons to expect both demand and supply to increase.

Despite it having the highest ratio of physicians per capita in the world -- one physician per 220 people -- Israel's supply of physicians will increase (Ministry of Health 1994). In 1993, there were 24,344 licensed physicians in Israel, 20% of whom were immigrants from the former Soviet Union. However, of the 7,900 immigrants who were physicians in the former Soviet Union, and came to Israel between 1992-1993, only 57% have received licenses (Nirel et al. 1994); this percentage is expected to rise to 83% in the coming years.

The demand for services will probably also increase. Throughout the world, emphasis is being placed on preventive medicine. In addition, by empowering the consumer to change sick funds, Israel's new health insurance law will pressure sick funds to provide satisfactory and sufficient patient services in a timely fashion. Further, the patient population is aging. Together, these factors will require both more physician time overall and more time per patient.

As the above factors indicate, there is currently a great need for manpower planning in Israel. The results presented in this paper can assist planners in answering the following questions:

- More home care will be needed as the population ages; which physicians provide this type of care, and why?
- Should physicians from the former Soviet Union be encouraged to practice medicine? If so, should they be encouraged to work as general practitioners or specialists in family medicine?
- If the average age of physicians is dropping, and if younger physicians work more hours per week, how much will the work force as measured in hours per week increase over and above the increase expected by the rising physician-patient ratio?

By using our findings on the influence of age and specialized training on activities, the effects of different choices can be estimated, thereby helping planners match supply to the growing demand.

Conclusion

Most physicians work many hours. Physician characteristics and practice organization influence how many hours physicians work, what activities they perform and how much time they spend with patients. The results of this study can influence reimbursement strategies, quality improvement programs and long-range manpower planning. When available, the overall NIVEL results will allow international comparison.

References

Armstrong, D.; and Griffin, G.A. 1987. "Patterns of Work in General Practice in the Bromley Health District". *Journal of the Royal College of General Practitioners* 37:264-266.

Buchan, I.C.; and Richardson, I.M. 1973. "Time Study of Consultations in General Practice". *Scottish Health Service Statistics No. 7.* Scottish Home and Health Department, Edinburgh.

Calnan, M.; and Butler, J.R. 1988. "The Economy of Time in General Practice: An Assessment of the Influence of List Size". *Social Science and Medicine* 26:435-441.

Eimerl, T.S.; and Pearson, R.J.C. 1966. "Working Time in General Practice: How General Practitioners Use their Time". *British Medical Journal* 2:1549-1554.

Flemming, D.M. 1987. "Consultation Length")Letter to the Editor). *Journal of the Royal College of General Practitioners* 37:179.

Gray, J. 1982. "The Effect of the Doctor's Sex on the Doctor Patient Relationship". *Journal of the Royal College of General Practitioners* 37:112-115.

Groenewegen, P.P.; and Hutten J.B.F. 1991. "Workload and Job Satisfaction among General Practitioners: A Review of the Literature". *Social Science and Medicine* 32:1111-1119.

Gross, R.; and Boussidan, S. 1992. "Decentralization in KHC Clinics: Results of a 1991 Survey of Members in the Negev Region". Internal Memo. JDC-Brookdale Institute, Jerusalem. (Hebrew)

Gross, R.; Yuval, D.; Yaphe, Y.; and Boerma, W. *The Role of the Primary Care Physician in Israel: Preliminary Findings from a National Survey*. JDC-Brookdale Institute, Jerusalem.

Hughes, D. 1983. "Consultation Length and Outcome in Two Group General Practices". *Journal of the Royal College of General Practitioners* 33:143-147.

Knight, R. 1987. "The Importance of List Size and Consultation Length as Factors in General Practice". *Journal of the Royal College of General Practitioners* 37:19-22.

Marsh, G.N.; and McNay, R.A. 1974. "Factors Affecting Workload in General Practice - II". *British Medical Journal* 269:319-321.

Mechanic, D. 1968. "General Practice in England and Wales: Results from a Survey of a National Sample of General Practitioners". *Medical Care* 6:245-260.

Ministry of Health. *Health Professionals: Physicians, Dentists and Pharmacists through 1993.* Government Printing Office, Jerusalem. (Hebrew)

Morrell, D.C.; Evans, M.E.; Morris, R.W.; and Roland, M.O. 1986. "The 'five minute' Consultation: The Effect of Time Constraints on Clinical Content and Patient Satisfaction". *British Medical Journal* 292:870-873.

Nirel, N.; Shemesh, A.A.; and Book, S. *Immigrant Physicians from the Former Soviet Union: Demographic Characteristics and Length of the Medical Licensing Process.* JDC-Brookdale Institute, Jerusalem.

Pringle, M.; and Stewart-Evans, C. 1990. "Does the Awareness of Being Video Recorded Affect Doctors' Consultation Behavior?" *British Journal of General Practice* 40:455-458.

Raynes, N.V.; and Cairns, V. 1980. "Factors Contributing to the Length of General Practice Consultations". *Journal of the Royal College of General Practitioners* 30:496-498.

Ridsdale, L.; Carruthers, M.; Morris, R.; and Ridsdale, J. 1989. "Study of the Effect of Time Availability on the Consultation". *Journal of the Royal College of General Practitioners* 39:24-25.

Roland, M.O.; Bartholomew, J.; Courtenay, M.J.F. et al. 1986. "The Five Minute Consultation: Effect of Time Constraint on Verbal Communication". *British Medical Journal* 292: 874-876.

Shuval, J.T. 1992. *Social Dimensions of Health - The Israeli Experience.* Praeger, London.

State of Israel. 1990. *State Commission of Inquiry into the Functioning and Effectiveness of the Health Care System -- The Majority Opinion.* Government Printing Office, Jerusalem. (Hebrew)

Taragin, M.I.; Wilczek, A.P.; Karns, M.E.; Trout, J.R.; and Carson, J.L. 1992. "Physician Demographics and the Risk of Medical Malpractice". *The American Journal of Medicine* 93:537-542.

Verhaak, P.F.M. 1986. "Bewerkelijkheid van Huisartsconsulten met Verschillende Klachten of Patienten, Uitgedrukt in Tijd". *Tijdschrift voor Sociale Gezondheidszorg* 64:558-562.

Westcott, R. 1977. "The Length of Consultations in General Practice". *Journal of the Royal College of General Practitioners* 27:552-555.

Wilkin, D.; Hodhkin, P.; and Metcalfe, D. 1986. "Factors Affecting Workload: Is Received Wisdom True?" In: *The Medical Annual. The Yearbook of General Practice*. Pereira-Gray, D.J., (ed.). Wright, Bristol.

WONCA. 1991. *The Role of the General Practitioner/Family Physician in Health Care Systems*.

Yuval et al. 1994. *The Independent Physician Program and the Clinic System in Kupat Holim Clalit: Summary of Findings from a Survey of Members*. JDC-Brookdale Institute, Jerusalem.

ONE WEEK ACTIVITY DIARY

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	TIME / main activity code	TIME / main activity code	TIME / main activity code	TIME / main activity code	TIME / main activity code	TIME / main activity code	TIME / main activity code
MORNING	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00
	8.00 - 9.00	8.00 - 9.00	8.00 - 9.00	8.00 - 9.00	8.00 - 9.00	8.00 - 9.00	8.00 - 9.00
	9.00 - 10.00	9.00 - 10.00	9.00 - 10.00	9.00 - 10.00	9.00 - 10.00	9.00 - 10.00	9.00 - 10.00
	10.00 - 11.00	10.00 - 11.00	10.00 - 11.00	10.00 - 11.00	10.00 - 11.00	10.00 - 11.00	10.00 - 11.00
	11.00 - 12.00	11.00 - 12.00	11.00 - 12.00	11.00 - 12.00	11.00 - 12.00	11.00 - 12.00	11.00 - 12.00
AFTERNOON	12.00 - 13.00	12.00 - 13.00	12.00 - 13.00	12.00 - 13.00	12.00 - 13.00	12.00 - 13.00	12.00 - 13.00
	13.00 - 14.00	13.00 - 14.00	13.00 - 14.00	13.00 - 14.00	13.00 - 14.00	13.00 - 14.00	13.00 - 14.00
	14.00 - 15.00	14.00 - 15.00	14.00 - 15.00	14.00 - 15.00	14.00 - 15.00	14.00 - 15.00	14.00 - 15.00
	15.00 - 16.00	15.00 - 16.00	15.00 - 16.00	15.00 - 16.00	15.00 - 16.00	15.00 - 16.00	15.00 - 16.00
	16.00 - 17.00	16.00 - 17.00	16.00 - 17.00	16.00 - 17.00	16.00 - 17.00	16.00 - 17.00	16.00 - 17.00
	17.00 - 18.00	17.00 - 18.00	17.00 - 18.00	17.00 - 18.00	17.00 - 18.00	17.00 - 18.00	17.00 - 18.00
EVENING	18.00 - 19.00	18.00 - 19.00	18.00 - 19.00	18.00 - 19.00	18.00 - 19.00	18.00 - 19.00	18.00 - 19.00
	19.00 - 20.00	19.00 - 20.00	19.00 - 20.00	19.00 - 20.00	19.00 - 20.00	19.00 - 20.00	19.00 - 20.00
	20.00 - 21.00	20.00 - 21.00	20.00 - 21.00	20.00 - 21.00	20.00 - 21.00	20.00 - 21.00	20.00 - 21.00
	21.00 - 22.00	21.00 - 22.00	21.00 - 22.00	21.00 - 22.00	21.00 - 22.00	21.00 - 22.00	21.00 - 22.00
NIGHT	22.00 - 7.00	22.00 - 7.00	22.00 - 7.00	22.00 - 7.00	22.00 - 7.00	22.00 - 7.00	22.00 - 7.00
	☐ not in charge ☐ in charge ☐ no calls at night number of calls:	☐ not in charge ☐ in charge ☐ no calls at night number of calls	☐ not in charge ☐ in charge ☐ no calls at night number of calls	☐ not in charge ☐ in charge ☐ no calls at night number of calls	☐ not in charge ☐ in charge ☐ no calls at night number of calls	☐ not in charge ☐ in charge ☐ no calls at night number of calls	☐ not in charge ☐ in charge ☐ no calls at night number of calls:

Optional activity codes:

1 = patient contacts in surgery
2 = visiting patients at home
3 = visiting patients in hospital
4 = on-call duties / emergencies
5 = infant welfare clinic
6 = travelling (professional)
7 = meeting other (health) professionals
8 = practice administration etc
9 = teaching, research etc.
10 = private time, breaks etc.
11 = other activities

UNK/IRE/ICE

Appendix II: An Explanation of the Inclusion of "Other" as Work Hours

When describing how they divided their work time, the physicians could choose "other" as an activity. Most (54%) of them never chose this category to describe their activities, yet almost 15% of the average physician's time is spent doing "other" work. This was interpreted as work activity rather than leisure time, after a number of sub-analyses were performed.

- When we included "other" as a work activity, we received a higher correlation with total work hours as described by physician in the questionnaires.
- Eighty-six physicians reported occasionally being engaged in two activities during a given hour. Seventy-three percent of these "other" activities were not "breaks", but were teaching or research (38%), emergencies (13%) or hospital care (12%). Assuming that if two activities are performed in an hour they may overlap, "other" is likely to represent work.
- We postulated that "other" activity might represent in-service training, or continuing medical education. Knowing that for most KHC physicians, continuing medical education occurs on Wednesday afternoons, we analyzed the work activities for those hours for physicians who have only one salaried position and are affiliated only with KHC. During those hours, less time was spent on "other" activity and 29.5% was devoted to teaching or research (compared to the overall average of 5.8%). Thus, apparently, the physicians did not classify continuing medical education as "other" (work).
- Physicians who had a hospital affiliation were more likely to use the category "other", suggesting that work in a hospital represents "other" activity.

These sub-analyses are consistent with our conclusion that, for the most part, "other" represents work activity.

ג'וינט־מכון ברוקדייל
לגרונטולוגיה והתפתחות אדם וחברה

הקצאת זמן בקרב רופאים ראשוניים בישראל

מרק טרגין • רויטל גרוס • דן יובל

דו"ח מחקר

עבודה זו נכתבה במסגרת תכנית
לחקר מדיניות בריאות המשותפת
לממשלת ישראל ולג'וינט-מכון ברוקדייל

דמ-298-97

ג'וינט–מכון ברוקדייל מהו?

מרכז ארצי למחקר בתחומי הזיקנה, התפתחות האדם ורווחה חברתית בישראל, שהוקם ב–1974.

ארגון עצמאי ללא כוונת רווח, הפועל בשיתוף עם הג'וינט העולמי (AJJDC) וממשלת ישראל.

צוות של אנשי מקצוע המקדישים עצמם למחקר יישומי בסוגיות חברתיות בעלות קדימות עליונה בסדר היום הלאומי.

קבוצת חשיבה שנטלה על עצמה מחויבות לסייע לקובעי המדיניות ולספקי השירותים בתכנון וביישום תכניות רווחה.

המחקר במכון מתבסס על גישה בין–תחומית. במכון חמש יחידות עיקריות:

- **זיקנה**
- **מדיניות בריאות**
- **קליטת עלייה**
- **מוגבלות**
- **המרכז לילדים ולנוער**

הקצאת זמן בקרב רופאים ראשוניים בישראל

מרק טרגין רויטל גרוס דן יובל

עבודה זו נכתבה במסגרת תכנית
לחקר מדיניות בריאות המשותפת
לממשלת ישראל ולג'וינט-מכון ברוקדייל

אלול תשנ"ז ירושלים ספטמבר 1997

ג'וינט-מכון ברוקדייל לגרונטולוגיה
והתפתחות אדם וחברה
ת"ד 13087
ירושלים 91130

טלפון: 02-6557400
פקס: 02-5612391

רשימת לוחות

רשימת תרשימים

תוכן העניינים

דברי תודה

ברצוננו להודות לכל הרופאים הראשוניים שאפשרו את ביצועו של מחקר זה והקדישו מזמנם למילוי השאלונים.

תודה לכל חברינו בג'וינט-מכון ברוקדייל אשר סייעו לנו בעצות ובהערות במהלך העבודה. תודה מיוחדת לשלמה בוסידן ולאביגיל דובני שהיו אחראים על עבודת השדה, ולברוך רוזן בעבור הערותיו על הטיוטה הקודמת של דוח זה.

אנו מודים ליונה יפה על הסיוע בביצוע המחקר. תודתנו שלוחה גם לזאב אהרונסון, יעקב זילברג, אברהם מידן, רחל קיי, מיכאל רוזנבלוט, ברכה רמות וחוה טבנקין בעבור הערותיהם ועזרתם בהכנת המדגם. לבסוף, תודה למרשה ויינשטיין שערכה את הדוח.

מידע זה יכול לסייע הן לחולים, הן לרופאים, והן למקבלי ההחלטות בקופות חולים ובמשרד הבריאות. לדוגמה, חולים הרוצים שהרופא יקדיש להם זמן רב יותר, יעדיפו, אולי לפנות לרופא עצמאי. קופות החולים ירצו אולי לדעת האם המומחים ברפואת משפחה מבצעים פעולות אחרות מאלה המבוצעות על-ידי הרופאים הכלליים. משרד הבריאות עשוי להתעניין באיכות הטיפול שמספקים אותם רופאים שמקדישים פחות זמן, בממוצע, לכל חולה.

יתרה מכך, משך הזמן הממוצע המוקדש כיום לחולה אינו תורם להרחבת שירותי מניעה בבריאות שאליה שואף משרד הבריאות. המידע על סך-כל שעות העבודה של הרופא יכול להוות תשומה חשובה לקובעי המדיניות העוסקים בתכנון כוח אדם רפואי, שכן מספר הרופאים הדרושים בעתיד הוא בחלקו תוצאה של זמן העבודה של הרופא.

בעבודה זו נעשה ניסיון ראשון לעמוד על פעילויות הרופא הראשוני. לתוצאות המחקר יכולות להיות השלכות על שיטות התגמול, על תכניות לשיפור האיכות, ועל תכנון לטווח ארוך של כוח אדם. לכשיתקבלו תוצאות המחקר הרחב יותר - מחקר ניבל - ניתן יהיה להשוות בין ישראל לבין המצב במדינות אחרות. יתר על כן, תוצאות המחקר הזה יכולות להוות בסיס להערכה של השפעת חוק ביטוח בריאות החדש על עומס העבודה של הרופאים ועל אורך הזמן המוקדש לכל חולה.

תמצית מחקר

חשיבותו היחסית של הטיפול הראשוני הולכת וגוברת. הרופא הראשוני מספק טיפולים אקוטיים, שירותי מניעה ובנוסף מפנה חולים לספקי בריאות אחרים. התמורות הרבות המתרחשות במערכת הבריאות בישראל מצריכות הבנה טובה יותר של עבודתו של הרופא הראשוני.

בשנת 1993 השתתף ג'וינט-מכון ברוקדייל במחקר בינלאומי שבדק את דפוסי עבודתם של הרופאים הראשוניים. למדגם אקראי שכלל 677 רופאים בארץ נשלחו שאלונים למילוי עצמי, ובהם שאלות על הפרטים הדמוגרפיים של הרופא, שביעות רצונו, סביבת העבודה, אוכלוסיית המטופלים והשירותים המסופקים. הרופאים גם התבקשו לרשום ביומן מיוחד את פעולותיהם במשך שבוע אופייני.

דוח זה מתמקד בכמות הזמן שהרופאים מקדישים לפעילויות מקצועיות, ובוחן מהן הפעולות הספציפיות שבוצעו. כמו כן נבחן את פרק הזמן הממוצע שהרופאים מקדישים לכל חולה. מידע זה יכול לסייע בהערכת מידת הנגישות של הרופא ואיכות הטיפול.

בקרב הציבור בישראל יש שאינם מרוצים מזמינותם של הרופאים הראשוניים. הסיבות לאי הזמינות הנתפסת יכולות להיות ציפיות בלתי סבירות של המטופלים, או שהרופאים אינם עובדים מספיק שעות במרפאות, או שהרופאים עובדים בשעות לא-נוחות. המחקר מספק נתונים הנוגעים לשתי האפשרויות האחרונות.

מחקרים שנעשו בארצות אחרות הראו שמשך הזמן שהרופא מקדיש לחולה משפיע על מדדים של איכות טיפול, כגון שביעות רצון, מתן תרופות והפניות. הנתונים שלנו מאפשרים לבחון את הקשר בין אורך הביקור, לבין משתנים ארגוניים כגון השתייכות לקופת חולים, תחום התמחות, והאם הרופא הוא עצמאי או שכיר.

מן הממצאים עולה, שרוב הרופאים עובדים שעות רבות. בממוצע, הם עובדים 50.4 שעות בשבוע. עשרה אחוזים מהם עובדים פחות מ-30 שעות שבועיות, ו-25% עובדים למעלה מ-60 שעות שבועיות. הפעילות העיקרית שלהם היא טיפול במרפאה (29.5 שעות), טיפול בבית (3.1 שעות), סידורים מינהליים (1.5 שעות) והוראה ומחקר (2.9 שעות). בממוצע הרפואים מקדישים לכל חולה 10.5 דקות.

עוד נמצא כי מאפייני הרופא והפרקטיקה משפיעים על מספר שעות העבודה, על הפעולות המבוצעות, ועל כמות הזמן המוקדשת לכל חולה. לדוגמה, רופאים מבוגרים יותר, ונשים, עובדים פחות שעות בסך הכל מעמיתיהם. יחד עם זאת, רופאים ורופאות עובדים אותו מספר שעות במרפאה, אבל הרופאות עובדות פחות שעות מחוץ למרפאה. גם לקופת החולים ולעבודה כרופא עצמאי או שכיר יש השפעה על סך כל השעות, על סוג העבודה, ועל הזמן המוקדש לכל חולה. לדוגמה, הרופאים העצמאיים מקדישים בממוצע כ-20% יותר זמן לכל חולה מאשר הרופאים השכירים. מכאן עולה, שמאפייני הרופא משפיעים הן על מי מספק טיפול במרפאה ומי מספק טיפולי בית, והן על מי מלמד, עוסק במחקר, ועוסק בעניינים מינהליים.