

# Visits to Physicians: A Critical Review of the Literature on Ambulatory Utilization in Israel

Philip Sax PhD

Unit of Drug Policy, Economics and Utilization, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer Sheva, Israel

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Data on health services utilization contribute to the monitoring and appraisal of the performance of health services and the extent of usage by patients. Past utilization and morbidity patterns provide useful inputs for making projections of probable future needs and demands on the health service, as well as for mapping out appropriate strategies to meet the anticipated changes. However, there are often competing rationales inherent in the use of information in processes of policy and planning decisions. Information is, in fact, data to which meaning and significance are attached depending on who is interpreting it.

Since the founding of the State of Israel in 1948 and possibly even before, until at least the 1970s, the consensus perception based on the available data was that the rate of utilization of ambulatory health services was (too) high. The usual point of reference was that rates of visits to physicians were much lower in western countries than in Israel. In the last decade or so however, data began to emerge suggesting that this measure of ambulatory utilization in Israel was on the decline.

This paper first briefly reviews the data and literature that provided the early evidence that utilization of ambulatory health services in Israel was (too) high. It then looks at the available evidence for declining rates of utilization, including comparisons with data and trends abroad. Factors that could explain this decline are then considered, as are the *underlying* factors, which in fact should be driving an increased rate of visits. This paper looks at how the data have been interpreted and used by the health service community including policy makers. It is proposed here that recognition of this changing reality has not yet been addressed and internalized in the public debate on the Israeli health care system.

## Literature and Sources

For the purpose of this review, the literature and any other sources that relate to the utilization of ambulatory services in Israel were searched. The review concentrates on those sources in which there was a reference to visits to doctors, in particular where quantitative data on rates of visits (new or prior data), trends and international comparisons were presented. The sources included academic literature, as well as publications by government bodies, sick funds and research organizations. Most

of the studies analyzing this quantitative parameter of ambulatory utilization are usually of two types – those based on physicians' records (physician diaries/patient records) or those based on interviews (patients/sick fund members/households). In recent years there has been a discernible trend to conduct surveys representing opinions of the whole population or of selected populations, such as immigrants or minority groups.

A most important source of data was the national Use of Health Service surveys carried out on four occasions since 1977 by the Central Bureau of Statistics [1–4]. One of the main purposes of the first survey was to attain data on the number of people using various medical services, both curative and preventive, combined with demographic and socioeconomic characteristics. It also provided data on the prevalence of several chronic diseases [1].

The surveys were conducted as a household survey appended to the Labor Force Survey. Approximately 6,000 households representing the permanent population of Israel were personally interviewed, excluding kibbutzim, institutions, and Bedouins living in the Negev district. The method allows for a follow-up to assess changes. The interviews were conducted with household member(s) aged at least 18, who supplied information on all household members. At least 30% of the individuals included in the surveys supplied their own information [1]. This means that, on average, one interviewee gave information on two other household members. A visit to a doctor is defined as a visit to any type of doctor in a clinic, doctor's home or outpatient clinic of a hospital during the 2 weeks prior to the interview. Reservations noted in survey publications include the problem of seasonal variations for data inflated for a full year, household interviews as a data source, and the probability that events may be forgotten or projected onto longer time periods.

Comparable published data from all four UHS surveys on the overall rate of visits to doctors are presented in Table 1. Data and sources other than from these surveys that are mentioned in the literature review below are presented in Table 2.

## Evidence for High Utilization

Yekutieli [5], sourcing mainly a number of small-scale studies carried out in the General Sick Fund (Kupat Holim Clalit)

**Table 1.** Rate of visits to physicians\* in Israel: data from national UHS surveys (per 100 persons, per quarter year)

Year [ref]	Total population	Jews/Non-Jews
1977 [1]	254	281/97 (349/108 incl. dentists)
1981 [2]	213	240/84 (309/105 incl. dentists)
1993 [3]	193	NA (262/191 incl. dentists)
1996 [4]	168	NA

\* Family practitioners and specialists (excludes dentists, unless otherwise stated)  
UHS = Use of Health Service, NA = not available.

**Table 2.** Rate of visits to physicians in Israel: data from non-UHS sources

Rate of visits (p.a. p.c.)	Period	Author, year [ref]	Methodology/notes
9.1-9.3, incl. specialists 7.0-7.3, excl. specialists	1960s and 1970s	Yekutieli, 1972 [5]	Small-scale studies in GSF clinics
13.5 (all types of visits)	1970-72	Antonovsky, 1972 [6]	Omnibus survey; adult Jewish urban population
6.8, primary care physicians	1982	Ron, 1985 [12]	GSF clinics, high proportion of elderly
4.0, primary care (physicians and nurses)	1981-82	Yekutieli and Fattal, 1991 [13]	Kibbutzim, high proportion of elderly and young
4.2, family physicians (4.7 urban towns; 3.9 kibbutzim)	1988-90	Tabenkin et al, 1993 [14]	Patients over 40 years old
6.0, primary care and some specialists	1989/90	Sax, 1992 [11]	National survey, similar to those carried out in other countries
7 (incl. specialists) 5 (excl. primary)	Not stated	Ministry of Health, 1990 [16]	Data source not stated (presumed to be GSF clinics)

clinics in the 1960s and 1970s, reviewed morbidity in general practice and patterns of utilization of ambulatory medical services. He noted that the rate of visits to physicians in Israel [Table 2] was clearly higher than in most other countries for both primary and specialist care. Interestingly, he also noted that the overall rate of visits was even higher prior to the establishment of the State. A major theme of Yekutieli's review was the burden and overload being placed on GSF clinics and its doctors and the need for teamwork. He also noted the similarity between morbidity patterns in Israel and other countries [5].

Based on results from an omnibus survey covering a representative sample of the Jewish adult urban population during 1970-72, Antonovsky [6] came to similar conclusions. He could not point to any population in other countries,

covering various types of medical care systems, that approximates the Israeli rate [Table 2], even though "the evidence is fairly clear that Israel's morbidity levels are at least on a par with that of America, England etc." [6].

In a review of the empirical literature from 1966 to 1978 as it related to patient and provider behavior in Israel, its authors noted that the comparatively high rate of clinic visits is well documented [7]. The review was concerned with explanations of utilization rates in sociodemographic terms and/or social psychological terms for which there was a considerable body of literature in the 1970s [5,8]. The reviewers noted that it was clear who the high utilizers are but not at all clear who the low users are or why. They criticized the sick funds for the sparse quality research and that the data were not available to a wider public.

Confirmatory evidence of high utilization came from the first national survey of use of health services that was conducted in 1977 [Table 1] [1]. The survey indicated an annual rate of visits in the Jewish population as 11.2, compared to only 3.9 in the non-Jewish population. The survey also quoted data from sick funds: namely 10-12 visits, excluding visits to hospital out-patient clinics, private doctors and dentists. It also compared the Israeli data with the much lower utilization rates in the USA and England [1].

Using physician-patient contacts as the measure, Ellenzweig [9] reviewed utilization patterns in Israel and in other countries. He noted that the UHS survey data, in agreement with other studies [6,10], validated the assessment of high utilization, and that patterns of utilization among the Jewish population in Israel were different from those in other countries, both overall and for all age groups. Ellenzweig explained this high utilization not only in terms of social factors as earlier studies had emphasized, but also in terms of behavioral, economic and organizational factors [9].

## Evidence for Declining Utilization During the 1980s

The findings from the second UHS 1981 survey showed a reduction in the number of visits to doctors in both the Jewish and non-Jewish populations [Table 1] [2]. While the authors noted that this survey allowed a comparison of the results of the two surveys, this decline in utilization was not commented on. It would take another 12 years until the third UHS survey was carried out in 1993 [3]. This period was notable for the absence in the literature of any comment or analysis on the finding in the 1981 survey that the rate of visits had declined. However, as we shall see below, the long interval between the 1981 and 1993 surveys was to become notable also for the fact that a variety of sources were indicating that the rate had declined and that, in some cases, Israel's level was even on a par with other typical comparator countries. In one case it was pointed out that this declining trend was in contrast with that seen in other countries [11].

UHS = Use of Health Service

GSF = General Sick Fund

During the 1980s, a few small-scale utilization/morbidity studies were undertaken in various urban and rural populations characterized by a high proportion of elderly persons [12–14]. Based mainly on doctor records and patient files, these studies indicated lower rates of visits to primary care physicians [Table 2] lower than seen in earlier studies and UHS surveys. Some postulated that this was partly due to teamwork [13,14]. The authors of one of the studies noted that their data were similar to those seen in England and other western countries [14].

Sax [11] compared 1989/90 data on rates of visits [Table 2], diagnoses and prescriptions in Israel with those of European countries [15], based on surveys conducted similarly by the same market research organization. The average number of both diagnoses and prescriptions in Israel were only slightly higher than the average of five Western European countries. It was also noted that other international data then available for 1960–87 showed a clear long-term rise in the rate of visits in many countries, and that a number of countries had a higher rate of visits than Israel by the mid-1980s. This Israeli trend was considered mainly in the light of organizational changes in sick funds and possibly increased patient satisfaction [11].

A Ministry of Health publication, which gave an overview of health and health services in Israel, devoted a brief section to utilization of services [16]. It noted that utilization of ambulatory care services by GSF members was about 7 visits on average per year (5 to primary care doctors, and 2 to specialists) [Table 2], compared to 4–5 visits in the UK, Holland and New York (USA). The overview briefly postulated that this trend towards reduced ambulatory visit rates was a result of health education, appointment systems, more convenient clinic hours, and the improved organization of clinic and support systems. Furthermore, it noted that the consumption of medicines among GSF members had also declined, and contended that this was mainly a result of health education, improved standard of diagnosis and health condition, and a modest charge for prescription drugs [16]. In a bibliographic footnote of a paper reviewing physician reimbursement in Israel, Rosen [17] also noted that there was some evidence of a declining rate of doctor-patient contacts.

### During the 1990s

The 1990s were to see the introduction of National Health Insurance, and more intensified moves to develop the planning, supervisory and policy-oriented roles of the Ministry. This was accompanied by an upsurge in UHS surveys: the third UHS survey in 1993 [3], which was followed by the first continuous 12 month survey during 1996–97 [preliminary publication, ref 4], and reportedly a planned survey for 1999–2000.

The data from the 1993 survey showed that the rate of visits by Jews had continued to decline [Table 1], while the rate for non-Jews had risen [3]. Again, there was no mention of this finding in the accompanying text summarizing the survey

results. In contrast, it did note those groups that were particularly high utilizers – the elderly, infants, members of small households, the poorly educated and the unemployed. For example, the alone elderly visited at a rate (6.2 per quarter) that was three times that of elderly in large households and over three times that of the overall national average [3].

The latest survey for which interim data have been published was carried out in 1996 [4]. The survey data indicated that the rate of visits continued to decline [Table 1]. The survey noted that these numbers were lower than expected relative to the previous survey, which referred to a different time of the year. The survey included, for the first time, members of kibbutzim and non-Jewish residents of East Jerusalem [4].

A Ministry of Health publication of health statistics in Israel included data from the first three surveys (1977, 1981, 1993) on the rate of visits to doctors [18]. The presentation clearly indicated that during the period 1977–93 the rate of visits had declined for Jews, while the rate for non-Jews had risen. More recently, the Ministry published an international comparison of selected health data between Israel and OECD countries, with data on the rates of visits for each country in 1981 and 1996 [19]. The data quoted for Israel (8.5 in 1981, and 6.7 in 1996) were based on the UHS surveys of those years [Table 3] [2,4]. As shown in the table, Israel was one of the few countries where the rate had declined. In a brief commentary, the only relevant point was that the number of visits to doctors in Israel was one of the highest among the surveyed countries.

### Factors Driving Increased Rates of Visits

When looking at possible factors to explain why rates have declined, one should not ignore the *underlying* factors that would have led one to expect the opposite – namely, increased rates. The main underlying factors considered here are the increase in both the supply of doctors and the size of the treated population, as well as changes in the organization of care.

#### Increase in supply of doctors

Israel saw a huge increase in the supply of doctors in the early 1990s, which could be manifested into a greater demand for services mainly initiated by doctors. Most of the immigrant doctors found employment in ambulatory health services, the majority within primary care clinics of the sick funds.

#### Increase in size of treated population

As in other developed countries, there are two main factors that may be behind an increase in the size of the treated population in recent decades: patient demography (age and gender, unemployment and deprivation) and increased notification of disease. With regard to the proportion of aged in the population, although this is still quite low compared to developed countries, the rate of increase in Israel (from a low base) has been particularly rapid in the last two to three decades. Unemployment and deprivation – socioeconomic factors known to drive increased utilization – have also increased in recent years. Moreover, some groups, as they

**Table 3.** Annual rate of visits to physicians: Israel and OECD countries (per capita)

Country	1996 (or other)	1981
Australia	6.6	4.5
Austria	6.3	5.4
Canada	6.8 (1993)	5.6
Denmark	5.3	5.0
England	5.9	4.7
Finland	4.3	3.3
France	6.5	4.2
Germany	6.5	11.6
Greece	NA	5.3
Hungary	14.8 (1995)	10.6
Iceland	4.5	4.9
<b>Israel</b>	<b>6.7</b>	<b>8.5</b>
Italy	8.3	8.3
Japan	16.0	14.6
Korea	9.5 (1995)	NA
Mexico	2.2	1.3
Netherlands	5.4	5.3
New Zealand	NA	3.8
Poland	5.4	6.5
Portugal	3.2	3.6
Spain	6.2 (1984)	4.7
Sweden	2.9	2.6
Switzerland	11.0 (1992)	5.7
Turkey	NA	1.2
U.S.A.	6.0	4.6

Sources: Refs. [19,30]. Israeli data based on UHS surveys [2,4].

establish themselves in Israeli society, tend to increase their utilization of health services. The large non-Jewish minorities, mostly Arab Moslem, have over time increased their utilization from traditionally very low rates [4]. In another (and unexpected) finding, increased utilization with time was also found to be true for many of the immigrants from the former Soviet Union. Research has shown that they initially use services less than the veteran population does, but with time, their utilization starts to resemble the level of the latter population [20]. Furthermore, in Israel as elsewhere, awareness by doctors, hospitals and patients of developments in diagnostic, prophylactic and therapeutic measures drives an increased notification and treatment of disease. Examples are the management of cardiovascular risk factors (hypertension, lipid levels), obesity, depression, and osteoporosis in increasingly large segments of the population.

### Organization of care

It is recognized that differences in utilization between sick funds can be partly accounted for by differences in the organization of care by the sick funds. An analysis based on the UHS 1993 survey data suggested that the 'odds' of visiting a primary care doctor and specialist were lower in the GSF than in the other funds after controlling for demographic and other member characteristics [21]. This could imply that patients leaving the GSF and joining one of the other funds, as many have done in

the last decade or so, could have contributed to an increase in utilization. In 1994-95, facing growing competition and falling membership, the GSF facilitated direct access to several specialists for the first time. A 1994 survey of patients referred by Israeli family physicians to consultants noted that the referral rate in Israel was among the highest, when compared with a European study of referrals [22].

### What is Behind the Declining Rates of Visits?

In spite of a number of factors that should be driving visits higher, overall rates have declined. What factors could explain this distinctly Israeli trend? The task of analyzing this is complicated by the absence of a clear time trend. There is evidence, based on both national and small-scale studies, that the rate began to decline during the 1980s if not earlier. It is suggested here that a number of environment-demographic-organizational factors have co-jointly operated in the direction of declining utilization.

### Less (existential) stress?

Since Israel's establishment until the early 1980s each decade has been witness to wars with the country's neighbors. Although still a stressful society, in the last decade the absence of major ongoing conflicts with neighboring countries perceived as threatening Israeli society/population may have contributed to a lowered level of need and demand for services.

### Immigration

A sociological replication study showed that former immigrants, characterized as high utilizers, tended to decrease their utilization as they became part of the veteran Israeli population [23]. Furthermore, new immigrants from the former Soviet Union, in contrast to the earlier waves of immigration, appear to be utilizing health services less than the veteran population in their first years of absorption. Seventy percent of these immigrants are being attended by a Russian-speaking doctor [20]. Furthermore, since 1991 they constitute the first group of immigrants to enjoy the freedom of choosing which sick fund to join (previously new immigrants were automatically enrolled in a fund, usually the GSF), and since 1995 they have enjoyed with the rest of the population the privilege of switching thereafter to whichever fund they choose.

### Organization of care

Earlier studies proposed that the introduction of physician-nurse teamwork has been a factor in the reduction of visits to doctors [13,14]. Furthermore, the introduction of an appointment system, particularly in the GSF has probably had a dampening effect on the frequency of visits, particularly repeat visits. By 1993, 80% of GSF primary care doctors and 55% of the other sick funds' doctors had implemented an appointment system [24]. Furthermore, the prescribing of repeat prescriptions has in recent years become more widespread, most significantly in the GSF, which also reduced the number of visits made by patients, particularly those with chronic ailments. A decline in

the phenomenon of “administrative” visits (e.g., mainly for work absenteeism) is also a factor here.

As mentioned earlier, from about 1994, the GSF has allowed its members to directly access a number of specialists, which previously required referral by the family or general practitioner. It is not clear what impact this has had on the overall level of visits to primary care doctors and specialists, but one may assume that it has also been a factor in reducing visits to primary care physicians. There is some evidence from surveys among primary care physicians that the daily number of patient contacts per physician has declined (from 39 in 1993 to 35 in 1997) [25].

### Financial disincentives

In a system where most doctors receive a salary, theory predicts a fall in visit rates when visit charges are introduced or increased. Until 1998, only the Maccabi Sick Fund had introduced a payment for visits to primary care physicians. The results of preliminary research suggested that the rate of visits, already relatively low in Maccabi, was reduced by about 12% [26]. A more widespread form of co-payment, which has become increasingly burdensome, is payment for prescription medicines. This has been imposed across all sick funds since the mid-1980s and may have had an impact not only on the volume of prescribing but to some extent on the rate of visits as well.

Another financial disincentive may be connected with the changing mix of methods of doctor reimbursement. There are many more ambulatory patients being treated by “independent” physicians, who receive reimbursement by a system of quarterly payments. Under this system, it is in the doctor’s interest to make an appointment with the patient no more than once every quarter.

### Conclusion

The *diverging trends* in ambulatory utilization seen in Israel (decreasing) and elsewhere (increasing) are, for the first time, leading to *converging levels* of utilization between Israel and other countries, at least as measured by the rate of visits to doctors. The most plausible reason for the decline appears to be the mix of changes in the organization of ambulatory care in Israel.

This review highlights a number of issues as well as pointing to some aspects that merit further investigation. The importance of applying reliable, accurate and comprehensive data, and of interpreting the data so that they yield useful information to assist in the planning and policy processes cannot be over-estimated. Specifically, it emphasizes the need for better monitoring of health services utilization, particularly by the sick funds. There is also a need for better understanding of who the high and low utilizers are. This will require further analysis, not only of the overall rate of visits but also of the internal changes that have occurred, with reference to variants of age, gender, ethnicity, or any variant for which there are data. Finally, it may be worth investigating whether there is any connection between the levels and trends in utilization of

ambulatory and hospital services, such as visits to hospital emergency departments and free-standing emergency centers (“Maramim”). In this context it is noteworthy that Israel’s hospitalization rates are considered to be low [27].

In contrast to the 1970s and early 1980s, when there appeared to be a consensus in interpreting the findings as high (or over) utilization and in offering various explanatory models, the more recent change in trends has received scant attention. Recognition and internalization of the change appear to be meeting resistance, possibly a result of the narrow and ongoing concentration on financial reforms in the health care system. The common assumption is that high utilization equates with high (national) expenditure on health. Furthermore, utilization data are often used to assess the efficiency of the health system. High rates are attached with claims of oversupply, waste and lack of real need, whereas low rates are presented as achievement of efficiency. This approach, based on the traditional view of over-utilization, has been the basis of policy proposals [28] to raise revenues, even until the present [29].

**Postscript.** Since writing this paper, subsequent UHS surveys carried out by the Central Bureau of Statistics confirm the continuing decline in rates of visits to physicians until the year 2000.

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**Correspondence:** Dr. P. Sax, P.O.Box 4645, Jerusalem 91045, Israel.  
Phone: (972-2) 678-5692, Fax: (972-2) 678-1515,  
email: saxp@netvision.net.il