NATIONAL INSURANCE INSTITUTE
Research and Planning Administration

Who Switches Sickness Funds in Israel?

by
Amir Shmueli[1]

Jacques Bendelac[2]

Leah Achdut[2]

Jerusalem, December 2005

[1] The Hebrew University of Jerusalem and the Gertner Institute.
[2] The National Insurance Institute of Israel.

Abstract

Background. A competitive national health insurance system was introduced in Israel in 1995. Consumer mobility has been traditionally a signal of market (managed) competition. However, since 1998, the sickness funds' switching rate has been stable at around 1% of the population. This low switching rate is explained by limited real options, similarity in the sickness funds' functioning, and reluctance to change providers.

Objective. The objective of the paper is to characterize the 1% of the population who switches in relation to the stayers in their age-sex groups in their sickness fund of origin, and to examine the implications on public policy.

Method. We used the National Insurance Institute Health Registry of the years 1999-2000 to compare selected socio-demographic characteristics of the switchers to those of the stayers.

Results. Switching is rare in older age groups. Within age-sex groups, relatively poor persons are more likely to switch than others, and older movers are relatively poorer. Overall, disabled persons are less likely than others to switch sickness funds, but in certain sub-populations, disabled persons are more likely than others to do so.

Conclusions. The 1% of switchers does not form a random draw from the age-sex-adjusted population. The over-representation of poor – and, in some population groups, disabled persons – is unique to the Israeli scene. It might be the result of demand-side initiatives, but also raises concern that the observed switching pattern may result from implicit "risk-export" exercised by the sickness funds under the Israeli incomplete age-based risk-adjustment system.

Table of Contents

Introduction

On January 1st 1995, a National Health Insurance Law was enacted in Israel. The Law defined a uniform package of services to be provided by the four sickness funds operating nation-wide in Israel. It envisioned a *managed competition* scheme, whereby the sickness funds compete on the quality of services as well as on some "extras", to attract consumers. Unlike the case in the Dutch or the German system, Israelis do not pay member fees directly to their sickness funds, so competition on price is not relevant. Under the law, health care is universal, and no (explicit) risk selection is allowed. Furthermore, open enrollment with an annual switching option is specified. Since 1998 the sickness funds are allowed to offer voluntary community-rated supplementary insurance policies to their members (only), which cover acute care services not covered by the package of benefits (such as alternative medicine, more physical therapy sessions, medicines not in the package, choice of surgeon etc.). These policies have become a major service on which sickness funds compete.

The incomes of the sickness funds consist of governmental transfers, insurees' co-payments, and supplemental insurance premiums. The governmental transfers include the age-based risk-adjusted capitation payments, complemented by a five severe conditions-specific risk sharing (Aids, Thalasemia major, Gauche, Hemophilia and End-stage renal disease). Partly as a result of the capitation payments to the sickness funds, the cost per age-standardized member has converged across the funds (for further details on the Israeli system see Shmueli, Chernichovsky and Zmora [1]).

As envisioned by the managed competition scheme, it was expected that some level of consumer mobility would be observed. Consumer mobility is traditionally taken to reflect a viable and active competition, which might assure good quality of

care and of service. During the first three years of the law, about 4% of the total population switched sickness funds annually (switching does not include newborns, deaths, or first registration of new immigrants). This figure reflected two factors: first, the sickness funds began aggressive marketing campaigns to sign on members (e.g. in malls and bus stations). Second, the law cancelled previously established effective restrictions on switching. Before 1995, two sickness funds exercised risk selection, and a third sickness fund was the only option available to certain parts of the population because of socio-political affiliation or geographical location. All those who had wished to switch but could not do that previously, materialized their wish during the first years after 1995. Since January 1st, 1998, the intention to switch sickness funds must be registered in a Post Authority office, and the annual rate of switchers has been quite fixed at 1%.

The reasons for the low switching rates in Israel (and in Belgium and the Netherlands as well) are discussed, in a five countries comparative context, by Laske-Aldershof et al. [2]. The conclusions are that, abstracting from reasons commonly associated with inertia, status quo bias, and reservation from changes, the limited choice options facing the Israeli population reduces the potential net benefits of switching, leading to low mobility. The limited choice setting results from the essential similarities across the four sickness funds, both in the basic and the supplementary insurance domains.

All four Israeli sickness funds operate as managed care organizations. The biggest sickness fund, with a 56% market share in 2000, operates like a staff-model HMO, owns eight general hospitals and provides most of its primary and secondary care by means of salaried physicians in its clinics. The small funds (market shares of 23%, 11% and 10%) have no hospitals, and contract selectively with hospitals, with

independent physicians and institutions for acute care. Many independent physicians and most hospitals contract with more than one sickness fund.

An additional possible barrier to consumer mobility among Israeli sickness funds has been the *waiting period* imposed on new buyers of supplemental insurance policies. Consequently, switching sickness fund bears transaction costs in the supplemental insurance market as well, which further reduce the net potential benefits of mobility.

The present paper focuses on the question of who are those who are more likely than others to switch sickness funds in Israel, and infers the implications for the Israeli system.

The importance of the question: "who switches?"

Some may argue that an annual rate of 1% switchers is too low to justify a concern about who are the switchers. We believe that the issue is important, and perhaps even more so precisely because of the low rate of switching, for several reasons. First, due to the very skewed distributions of health, medical expenditure and income, and the strong correlations among them, a 1% of the population who switches sickness funds might concentrate much larger shares of health, income or medical care costs. Second, as mentioned above, competition among the sickness funds can be effective if consumers search and compare options. In order for public policy to spread information and to enhance switching efficiently, the identity of the (non) switchers must be known. Third, switching behavior might affect the quality of care offered by the sickness funds. If, for instance, older and sicker persons are less inclined to switch than others, sickness funds may find it unprofitable to invest in high quality care for those patients, and thus may direct their efforts to compete on persons

who are more likely than others to switch. Finally, switching behavior is important for risk adjustment. Risk adjustment aims to make the sickness funds indifferent with respect to the insurees' level of risk and expected costs as well as to the quality of care of different services. Thus, with reference to the example just given, risk adjustment should search to neutralize such distorting incentives.

Generally, three types of switches among sickness finds can be identified. The first type consists of *technical switching*. These switches are the result of other, mostly exogenous, decisions. For example, one may switch sickness funds because of moving to another city or region. Technical switches are expected to concentrate in young ages and to be random in a cross-section. The second type of switch reflects choices made by individuals based on their preferences vis-à-vis the different attributes of the optional sickness funds. These are the classical consumer choice cases. The attributes may include price (not relevant in the Israeli system, as mentioned above), waiting times for appointments, accessibility of specialist services, administrative complexity, proximity of providers and other determinants of the quality of services. Different bundles of attributes may appeal to different personal characteristics such as level of education, income, family composition, or age. Most of the studies have focused on these switches, including the estimation of price elasticities [3-5]. These switches reflect consumers' free choice and serve as an incentive for lower price and better quality of care and service. Earlier studies generally found that younger age groups, healthier, more educated and richer persons were more likely than others to switch sickness funds/health plans. We reiterate that price sensitivity has been an importance factor in all those studies and that the present study offers an opportunity to examine the above effects when price is not relevant.

The third type of switch includes those related directly to health state and to the level of expected medical expenditure. These switches might be initiated by the individual, searching for e.g., better quality or quantity of services and care, a reason which appeals more to sick individuals than to the young and healthy. This is a demand-side factor, which is a variant of adverse selection. They might, however, be the result of the sickness funds' strategy, namely, (implicit) risk selection activities to induce sick individuals to leave, facing an incomplete risk-adjustment scheme.

From a societal perspective, and from a risk-adjustment point of view, the third type of switch is the most interesting one. However, it is the most difficult to analyze, since information on health status and expected and actual expenditure is needed. Either as an adverse selection or risk selection act, such switches reduce welfare, since they distort the incentives for high quality care for sick persons and might cause financial difficulties to certain plans.

Data and methods

We use information from the National Insurance Institute's Central Health Registry for the years 1999-2000, which contain selected personal characteristics on all Israeli residents by their sickness fund, including an identification of the switchers. In particular, we focus on the following personal characteristics in relation to switching behavior: age, gender, wage, employment status, and whether or not the individual receives income support, disability, or unemployment benefits. We note that the receipt of the above benefits stops at retirement age (in the above years: age 60 for women and 65 for men), when they are replaced by old-age benefits.

With respect to each of the above personal traits, in each sex-age group in the sickness fund of origin, we calculated the ratio between movers and stayers for each

personal trait under discussion (e.g., the percent receiving disability benefit). The totals were calculated as weighted averages of the group specific rates.

We tested statistically these ratios by testing the equality of the means/proportions between movers and stayers. A t-test was used to test the equality of mean incomes, and chi-square tests were used to test the equality of the proportions receiving income support, disability, or unemployment benefits.

Results

Table 1 presents the percent switching sickness fund in the years 1999 and 2000 by age and gender (the column on the far right presents the size of the age groups in the population in November 1999). The overall rate is 1%, which has been stable during the period since 1998. The mobility rates are quite similar among men and women in most age groups. Particularly high rates are found in age groups 15-34 and 0-4. These switches are probably technical, of young singles and couples with small children. The propensity to move declines steadily with advanced age. Among the 75+ elderly, only 0.3% switched sickness fund in 2000. Although the rates differ across the four sickness funds, this pattern is seen in all of them.

Additional general findings (not presented in Table 1) indicate that while the mean age of the insured population was 32 in 2000, the mean age of movers was 26. It is interesting to note that in the two "older" sickness funds the mean age of leavers was higher than that of joiners, while in the other two the opposite was found. This finding implies that in the long run, switching sickness funds is going to change the age structure of the four sickness funds, rendering it more uniform.

Table 2 presents the mean labor-income of switchers relative to the stayers' by age-sex in their sickness fund of origin in 1999 and in 2000. Among salaried persons,

both men and women, switchers have about 20% lower wages than do the stayers. With advanced age, the switchers have relatively lower wages than do those in younger age groups. For example, in 1999, the mean wage among movers in the 35-44 age group was 95% of the mean among stayers, while in the 65-74 age group the proportion was only 60%. A similar pattern was found in all sickness funds. In most of the cells, the ratio of the movers' wages to the stayers' wages was significantly smaller than one. Only in the 15-24 age groups – and among men in particular – are movers richer than stayers. A similar picture appears among the self-employed (because of small cells we combined the upper age groups into 45+).

The findings that the switchers were poorer than average and that the gap increased with age are confirmed by Table 3. In 1999, the rate of income support recipients among switchers was 1.4 times the rate among stayers (the rate of recipients in the population was 2.3%). In 2000, the ratio was 1.19 (and the rate in the population was 2.48%). This ratio increased with age in both years and among men and women. For example, it was 1.56 in 1999 in the 25-34 age group, and reached 2.01 in the 55-65 age group. All ratios are significantly larger than 1.

Table 4 shows that the relative rate of unemployment benefit recipients among movers was around 1 (and not significantly different from 1) in 1999 (the population rate was 1.52%), and well (significantly) above 1 in all cells except two in the year 2000 (the population rate was 1.34%). For the entire population, for example, the ratio was 1.27.

Finally, Table 5 presents the relationship between switching and the receipt of disability benefit. Overall, the rate of recipients of disability benefit among movers was 0.73 and 0.63 the rate among stayers, in 1999 and 2000 respectively (the rates in the overall population were 2.3% and 2.31%, respectively). In other words, disabled

individuals were less likely than others to switch. However, the ratio increased somewhat with age in both years and among both men and women. In particular, it was larger than one in 1999 in the age group 35-54. In one sickness fund, the 1999 overall ratio was 1.46, and in all age groups the ratio was higher than one, reaching 2.76 in the 45-54 age group. In another sickness fund, the ratio was greater than one for ages above 25. The 2000 figures were similar.

Discussion

The results indicate that while only about 1% of the population switches sickness funds in Israel yearly, the switchers are far from being a random draw from the population with respect to several important characteristics.

The tendency to switch is highest among young (ages up to 34) singles and couples with small children. Part of these moves is probably technical (e.g., as a result of switching to a larger apartment), part of them reflects consumers' choices and may have originated from a search for better quality or availability of pediatric or gynecological care. Still another part of these moves might have responded to selective marketing favorable risk selection by (some or all) the sickness funds, trying to attract young children. Children represent a predictable profit under the present capitation formula, due to the over-paying rate for that age group.

A similar argument might explain the higher switching rates found among Arabs, who have typically more children than do (secular) Jews. Arab residents, with (on average) relatively bigger families, worse health, and lower incomes have been historically concentrated with one (the biggest) sickness fund, as a result of risk selection by the other funds. With the introduction of the national health system in 1995, the services of the other sickness funds became more accessible, inducing

relatively higher switching rates. The over-paying risk-adjusted rate for children made young Arab families particularly attractive.

A lower tendency of elderly persons to switch sickness funds was found in Germany, the US and the Netherlands as well [3-5]. This is a result of higher transaction costs of switching, including the effort needed to retrieve information and the discomfort of changing physicians.

Poor persons (with low wages, and/or receiving income support or unemployment benefit) are over-represented among the switchers. Furthermore, that over-representation increases with age, at least among wage-earners. This means that switching sickness funds is largely an inferior good. This is inconsistent with other studies' results suggesting that switching is a normal good.

Poor persons' switches are hardly expected to be technical moves. They are also not a result of higher price-elasticity, since there is no price competition on the premium in Israel. Co-payments are approximately equal across sickness funds as well, so that a search for lower co-payments can hardly be a reason to move (in addition, recipients of income support and disability benefit were exempted from paying co-payments).

One possible demand-side explanation is the lower ownership rate of supplemental insurance among poor persons [6]. As was mentioned earlier, newcomers who buy supplemental insurance must bear a *waiting period*, which is expected to discourage moves. The lower ownership rate thus reduces the transaction costs of moving for poor persons. Another demand-side explanation might be that among rich persons, the particular sickness fund one chooses is of little importance, since in any case they opt out to private medicine when needed.

Another type of explanation for the higher propensity to move among poor persons lies in the correlation between income and health. It is well known that in Israel, as in other countries, poor persons are sicker than rich persons, and use more health services [7]. The over-representation of the poor among switchers may thus reflect a higher tendency to move among sick individuals. These might be health-related moves of the third type mentioned above. While the literature concludes that the likelihood to move is lower among sick persons because of the high transaction costs of switching, originating from their greater involvement with both the administrators and providers of care (e.g. Strombom et al. [4]), sick persons are expected to be more sensitive than others to the quality, availability and quantity of the care they receive. They are also more knowledgeable on the quality of services because of their greater use of services. If they feel that they are being under-served, they might switch to another sickness fund, where they hope to find more and better care.

While such a switch among sick persons might reflect a rational demand-side move, that under-serving may have resulted from strategic implicit selection and skimping activities on behalf of the sickness funds, in light of the incomplete risk adjustment scheme. Under the Israeli age-based risk adjustment scheme, sick persons of any age are predictable losses, and "exporting" them to another sickness fund is likely to be profitable. Furthermore, in advanced age, mean health deteriorates and expected medical care costs increase, but the difference in mean costs between sick and healthy elderly diminish [8]. Consequently, in advanced age groups, persons who represent significant losses are sicker, relative to the age group mean, than in younger age groups. Within the present discussion, these sicker elderly – the induced leavers -

are identified as poorer relative to the stayers and the age group mean than in younger age groups.

The results show that in general, persons receiving disability benefit are less likely than others to switch sickness funds. Since disability and poor health and use of services are positively related, this finding is consistent with previous research [3-5]. However, the results indicate that this is true only for the population as a whole. In the 35-54 age group and in two sickness funds, disabled persons are *over*-represented among the switchers. Possible reasons for such findings are similar to the ones discussed above with respect to poor – and sick – persons being over-represented among the switchers. Namely, disabled persons may have felt that they were under-served in their sickness fund and switched in hope to receive more appropriate care.

Such under-serving might have resulted from implicit risk-selection. As an illustration of the working of such selection, we note that the sickness fund with the highest (consistently across all age groups and in both years) over-representation of disabled persons among the switchers contracts independent physicians to provide primary and secondary care. These independent physicians largely run solo-practices in their own homes or in rented apartment-clinics, with no special accessibility arrangements for disabled persons. Disabled persons are thus forced to switch providers – and often sickness fund – in order to gain physical accessibility to clinics. Since disabled persons of all ages, are – under the Israeli risk-adjustment scheme – predictable losses, that particular sickness fund profits from the implicit risk selection.

Conclusions

Switching sickness funds is rare in Israel. About 1% of the population switch sickness fund annually. Such a low mobility might indicate that competition is not

effective in providing incentives for good quality of care and services. Public policy should remove barriers to move, and assure the dissemination of relevant information. Barriers to move include the terms of supplementary health insurance offered by the sickness funds.

The main observation of the present study is that in Israel, unlike in other systems, poor persons are more likely than others to switch. While several demand-side explanations can be offered, one cannot rule out the possibility that because of incomplete age-based risk-adjustment system, the poor – who are sicker than average in all age groups – are predictable losses, and their higher switching rates result from implicit risk-selection. On the other hand, young children are predictable profits, and thus favorably selected (attracted) by the sickness funds, inducing again high switching among them and their young parents. Public policy should improve the risk-adjustment system, in order to provide incentives to the sickness funds to differentiate themselves as proving good quality care to all, including those sicker than average.

References

1. Shmueli A., Chernichovsky D. and Zmora I., Risk adjustment and risk sharing: the Israeli experience, *Health Policy* 65:37-49, 2003.

2. Laske-Aldershof T., Schut F., Beck K., Greß S., Shmueli A., and Van de Voorde C., Consumer Mobility in Social Health Insurance Markets: A Five-country Comparison, *Applied Health Economics and Health Policy*, March 2005.

3. Schut FT, Gres S. and Wasem J., Consumer price sensitivity and social health insurer choice in Germany and the Netherlands, *Int J of Health Care Finance and Economics*, 3:117-139, 2003.

4. Strombom BA, Buchmueller TC and Feldstein P., Switching costs, price sensitivity and health plan choice, *J of Health Economics* 21: 89-116, 2002.

5. Laske-Aldershof T. and Schut FT, Switching behavior of consumers in the Dutch social health insurance, unpublished 2002.

6. Achdut L., Shmueli A. and Sabag-Endbeld M., Financing health care during the first decade of the National Health Insurance law, Paper presented at the conference "A Decade for the National Health Insurance Law in Israel", Tel Aviv, March 2005.

7. The Israel National Institute for Health Policy Research, Inequalities in the Israeli Health System, The 4th Dead Sea Conference Final Report, July 2003 (Hebrew).

8. Zmora I., The capitation formula of Clalit Health Services, Paper presented at the RAN meeting, Amsterdam, November 2004.

A p p e n d i x

Table 1: Percent leaving their sickness funds by age and gender

Age group	1999			2000			N (000) (Nov 1999)
	Total	Men	Women	Total	Men	Women	
Total	1.01	0.99	1.02	1.04	1.03	1.05	6281
0-4	1.39	1.37	1.41	1.46	1.44	1.47	641
5-14	0.85	0.86	0.85	0.91	0.92	0.91	1182
15-24	1.88	1.73	2.02	1.71	1.53	1.86	964
25-34	1.37	1.40	1.34	1.45	1.52	1.39	941
35-44	0.73	0.73	0.74	0.82	0.86	0.79	791
45-54	0.49	0.44	0.53	0.57	0.54	0.60	713
55-64	0.45	0.41	0.49	0.52	0.45	0.57	422
65-74	0.37	0.35	0.38	0.42	0.40	0.43	352
75+	0.23	0.22	0.23	0.28	0.25	0.30	275

Table 2: The ratio of mean income of movers and of stayers

Age group	1999			2000		
	Total	Men	Women	Total	Men	Women
Employees						
Total	0.78^	0.76*	0.81*	0.79*	0.80*	0.79*
15-24	1.06*	1.07*	1.06*	0.96#	1.03*	0.95*
25-34	0.93*	0.92*	0.93*	0.96*	0.94*	0.93*
35-44	0.95*	0.94*	0.96*	0.88*	0.88*	0.88*
45-54	0.91*	0.92*	0.90*	0.82*	0.81*	0.85*
55-64	0.86*	0.84*	0.89*	0.74*	0.74*	0.75*
65+	0.60*	0.55*	0.75#	0.57*	0.56*	0.73*
Self-employed						
Total	0.86*	0.84*	0.91*	0.88*	0.85*	1.08#
15-24	1.17*	1.26*	1.04#	0.68*	0.75*	0.57*
25-34	0.91*	0.89*	1.06#	1.01#	1.00#	1.17#
35-44	0.97*	0.95*	0.78*	0.89*	0.87*	0.98*
45+	0.83*	0.81*	1.13#	0.85*	0.76*	1.39#

* The ratio is different than 1 at p=0.01.

The hypothesis that the ratio equals 1 cannot be rejected at p=0.01

Table 3: The ratio of the percent of persons with income support among movers and among stayers

	1999			2000		
Age group	Total	Men	Women	Total	Men	Women
Total	1.40*	1.40*	1.40*	1.19*	1.16*	1.21*
18-24	1.38*	1.34*	1.37*	1.29*	1.36*	1.25*
25-34	1.56*	1.72*	1.47*	1.11*	1.14*	1.09**
35-44	1.59*	1.65*	1.55*	1.41*	1.40*	1.43*
45-54	2.23*	2.11*	2.24*	1.70*	1.74*	1.65*
55-65	2.01*	2.22*	1.92*	1.71*	1.60*	2.04*

* The ratio is greater than 1 at p=0.01 one-side chi-square test.

** The ratio is greater than 1 at p=0.10 one-side chi-square test.

Table 4: The ratio of the percent of persons with unemployment benefit among movers and among stayers

	1999			2000		
Age group	Total	Men	Women	Total	Men	Women
Total	0.99#	0.93#	1.05#	1.27*	1.26*	1.28*
18-24	0.75#	0.60#	0.89#	1.26*	1.29*	1.23*
25-34	0.97#	0.96#	0.99#	1.20*	1.11*	1.29*
35-44	1.10#	1.11#	1.09#	1.16*	1.31*	1.00#
45-54	1.17**	1.22#	1.14#	1.33*	1.49*	1.19#
55-65	1.00#	1.14#	0.86#	1.29*	1.37*	1.52*

* The ratio is greater than 1 at p=0.01 one-side chi-square test.

** The ratio is greater than 1 at p=0.10 one-side chi-square test.

\# The hypothesis that the ratio equals 1 cannot be rejected at p=0.01.

Table 5: The ratio of the percent of persons with disability benefit among movers and among stayers

	1999			2000		
Age group	Total	Men	Women	Total	Men	Women
Total	0.73*	0.75*	0.71*	0.63*	0.63*	0.63*
up to 24	0.76*	0.80**	0.73*	0.64*	0.63*	0.68*
25-34	0.99#	1.06#	0.88#	0.65*	0.63*	0.68*
35-44	1.13*	1.30*	0.95#	1.00#	1.01#	0.97#
45-54	1.33*	1.30*	1.35*	0.90#	0.94#	0.88#
55-65	0.85*	0.93#	0.80**	0.89**	1.02#	0.79**

* The ratio is different than 1 at p=0.01.

** The ratio is different than 1 at p=0.10.

\# The hypothesis that the ratio equals 1 cannot be rejected at p=0.01.