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Disparities between Population Groups in Israel in the Use of the Health Plans' Voluntary Health Insurance Programs (HP-VHI)

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Abstract

Background

The voluntary health insurance marketed by the health plans (HP-VHI) covers about 77% of the population and fulfills an important role in the financing and provision of health services in Israel. Reports published in recent years by the Ministry of Health's Branch for Supervision of the Health Plans and HP-VHI point to disparities between regions in the utilization of the services covered by the HP-VHI.

Objectives

The Ministry of Health asked the Myers-JDC-Brookdale Institute to assess the disparities in HP-VHI utilization across geographic regions, while controlling for health status and socioeconomic characteristics.

The research questions were as follows:

1. In which HP-VHI services are there disparities in utilization by place of residence and what is the magnitude of those disparities?
2. Have these disparities changed in magnitude during the decade between 2012 and 2021?
3. Are there disparities in the probability of using HP-VHI services by place of residence even after controlling for differences in needs (as measured by health status indicators) and what is their magnitude?
4. Which background and socioeconomic characteristics (age, gender, population group, household size, education and income) have an effect on the probability of using these services?

Methods

The study is based on data gathered by the "Public Opinion on the Level of Service in the Healthcare System in Israel and its Functioning" survey carried out in 2012 and 2021 among the adult population (aged 22+) in Israel. The following HP-VHI services were examined: Choice of surgeon or private hospital; visits to specialists; discounts on dental treatment; discounts on the purchase of drugs; fertility treatment, pregnancy, and childbirth services; and child development services.

Bivariate analyses (χ^2) were carried out to estimate the differences in the rate of utilization for each of the services by region for 2012 and 2021. Subsequently, multivariate models were constructed for 2021 for each of

the six services based on three-stage logistic regression. The dependent variable was use of a particular service at least once during the two years prior to the survey. In the first stage, the only explanatory variable was the region of residence. In the other two stages, in which additional regressions were estimated, control variables were added: population group (ultra-Orthodox Jews, Arabs, and non-ultra-Orthodox Jews), education, income, gender, age and health status.

Main Findings

For the population as a whole, the reported rate of utilization of at least one HP-VHI service two years prior to the survey fell from 76% in 2012 to 67% in 2021. The only service in which there was an increase in utilization was visits to a specialist. The multivariate analyses carried out on the data for 2021 showed that the region of residence accounts in part for utilization differences for some of the services, even after controlling for other variables. Other key findings were as follows:

- Health status was found to be associated with HP-VHI utilization. Respondents who reported a mediocre, poor, or very poor health status were more likely to visit a specialist and to use discounts on the purchase of drugs. Chronically ill respondents had a high probability of using discounts on the purchase of drugs.
- Income in the lower three quintiles and a non-academic education lowered the probability of visiting a specialist while a non-academic education of the parent lowered the probability of using the child development service.
- Arabs had a higher probability of using fertility treatment, pregnancy, and childbirth services and of choosing a surgeon and a private hospital than non-ultra-Orthodox Jews. Ultra-Orthodox Jews had a higher probability of using discounts to purchase drugs than non-ultra-Orthodox Jews.

Conclusion and Discussion

This is the first in-depth assessment of the utilization of HP-VHI services and the first attempt to estimate disparities between population groups. The data for 2021 show differences in utilization for some of the services according to region of residence, even after controlling for other variables. However, it is important to emphasize that the study does not include data on the supply of services (such as availability, as measured by per capita physician hours per unit of time) or measures of access (ability and desire of the patient to obtain the available services) and therefore the disparities that were found among the regions cannot be attributed directly to differences in availability of or access to services. Moreover, HP-VHI expands, supplements and duplicates the coverage of national health insurance (NHI) and therefore policy with regard to NHI coverage, as well as the availability of and access to NHI services, affect the probability of HP-VHI utilization.

Furthermore, other factors were found to be associated with HP-VHI utilization, including age, health status, population group (Arabs/ultra-Orthodox) and household size. Income and education explain some of the variation in the use of services and suggest the existence of barriers to access for some services. This should be taken into account when considering interventions to reduce inequality.

Executive Summary

Background

National Health Insurance (NHI) is mandatory for all residents of Israel and is financed progressively, i.e. according to the beneficiary's ability to pay (level of income) rather than the need for or utilization of services. The utilization of services covered by NHI should be egalitarian, i.e. based on need rather than ability to pay.

Alongside NHI, residents can purchase voluntary health insurance (VHI) which supplements, expands and duplicates NHI's public benefits basket. This VHI is regressive, i.e. the premiums do not depend on ability to pay but rather on the risk of using services (which is influenced by, for example, the age of the beneficiary). VHI creates disparities between those who purchase it and those who don't in the availability of, and access to, services.

The VHI marketed by the health plans (HP-VHI) covers 77% of the population and currently fulfils an important role in the financing and provision of healthcare services in Israel. Therefore, it is important for overall health system equity that the use of HP-VHI services be egalitarian, i.e. according to need rather than ability to pay. Reports published in recent years by the Ministry of Health's Branch for Supervision of the Health Plans and HP-VHI point to disparities between the regions in the utilization of the services covered by the HP-VHI. It is important to understand whether these disparities are the result of differences in needs of the HP-VHI policy holders residing in the different regions or other factors.

Objectives

The goal of the study is to examine disparities in utilization of HP-VHI between different regions, while controlling for health status and socioeconomic characteristics. Following are the research questions:

1. In which HP-VHI services are there disparities in utilization by place of residence and what is the magnitude of those disparities?
2. Have these disparities changed in magnitude during the decade between 2012 and 2021?
3. Are there disparities in the probability of using HP-VHI services by place of residence even after controlling for differences in needs (as measured by health status indicators) and what is their magnitude?
4. Which socioeconomic characteristics (age, gender, population group, household size, education and income) have an effect on the probability of using these services?

Methods

Since 1995, the Myers-JDC-Brookdale Institute has carried out a series of biennial surveys among the adult population (aged 22+) assessing the "Public Opinion on the Level of Service in the Healthcare System in Israel and its Functioning". We used data from the 2012 and 2021 surveys. The services examined in this study were: Choice of surgeon or private hospital; visits to a specialist; discounts on dental treatment; discounts to purchase drugs; fertility treatment, pregnancy, and childbirth services; and child development services.

Bivariate analyses (2) were carried out to estimate the disparities in the rate of utilization for each of the services according to six regions of residence (North, Haifa, Center, Tel Aviv, Jerusalem and Judea and Samaria and the South) and according to residence in a peripheral or highly peripheral city, as defined by the CBS, relative to residence in a non-peripheral city. The periphery index is a weighted average of two components: potential for access and the proximity to the border of the Tel Aviv region. The values of the index range from 1 to 10 and cities with a value of between 1 and 4 are defined as peripheral or highly peripheral. Following the bivariate analyses, multivariate models were built for the 2021 data for each of the six services based on three-stage logistic regression. The dependent variable was utilization of a particular service at least once during the two years prior to the survey. In the first stage, the only explanatory variable was the region of residence. In the two subsequent regression stages, additional control variables were added: population group (ultra-Orthodox Jews, Arabs, and non-ultra-Orthodox Jews), education, income, gender, age and health status (mental distress, a chronic illness and subjective health status).

Findings

For the population as a whole, the reported rate of utilization of at least one HP-VHI service fell from 76% in 2012 to 67% in 2021. In a breakdown based on region, a decline in the utilization of HP-VHI was found in all regions. In a breakdown between peripheral and non-peripheral regions, no significant differences in the rate of HP-VHI utilization in 2012 were found. In contrast, a difference of 5 percentage points in utilization was found in 2021, in favor of residence in the non-periphery (with residents who do not live in the periphery using HP-VHI more). Key findings from the analysis of disparities for each service in 2021 were as follows:

Choice of a surgeon and a private hospital: The bivariate analysis showed that the rate of utilization of this service was higher in Jerusalem and Judea and Samaria relative to the other regions. The multivariate analysis showed that even after controlling for additional variables, the residents of Jerusalem and Judea and Samaria

have a higher probability of using this service relative to Tel Aviv residents. The following variables were found to have a positive association with service utilization: mediocre, poor, or very poor health status, women, age 65+ and the Arab population.

Visits to a specialist: The bivariate analysis found that a lower proportion of periphery residents use this service. No differences were found in rate of utilization by region. However, the multivariate analysis controlling for additional variables found that residents of the Center and the South have a higher probability of using this service than residents of Tel Aviv. Similarly, women have a higher probability of using this service than men; individuals with an mediocre, poor or very poor health status have a higher probability than individuals with a good health status; and adults aged 35+ (except those aged 55–64) had a higher probability than the 22–34 age group. Low income and low level of education was associated with a low probability of using this service.

Fertility treatment, pregnancy, and childbirth services: The proportion of periphery residents who use this service was higher than that of non-periphery residents. No differences were found in the rate of utilization by region, either in the bivariate analysis or the multivariate analysis. The following variables were found to be associated with the probability of using this service: household size, where a larger household had a lower probability of using this service; and population group, where Arabs had a higher probability of using this service than non-ultra-Orthodox Jews.

Discounts on the purchase of drugs: In both the bivariate and multivariate analyses, differences were found in the use of this service according to region. The residents of Jerusalem and Judea and Samaria and residents of the South had a higher probability of using this service than residents of Tel Aviv. Similarly, ultra-Orthodox Jews had a higher probability of using this service than non-ultra-Orthodox Jews, and individuals with a chronic illness or who reported a mediocre, poor or very poor health status have a higher probability of using this service than those who reported a good health status. The 64+ age group had a lower probability of using this service than the 22–34 age group.

Discounts on dental treatment: According to the bivariate analysis, there are no differences in the rate of utilization of this service according to region. However, the multivariate analysis showed a difference between residents of the South and residents of Tel Aviv, where the former have a higher probability of using this service. Similarly, it was found that the 55+ age group had a lower probability of using this service than the 22–34 age group.

Child development services: The rate of utilization in Jerusalem and Judea and Samaria was higher than in the other regions. However, when controlling for other variables, no differences were found between regions, and

differences in utilization were related to household size (i.e. larger households use this service more) and to academic education of the parent.

In sum, it can be said that the region of residence is related to utilization for some of the services, even after controlling for additional variables. Similarly, health status is also related to HP-VHI utilization, as is socioeconomic status. Therefore, it can be concluded that there are services for which the disparities in utilization of HP-VHI are not simply the result of different levels of need.

Conclusion and Discussion

This is the first study to carry out an in-depth analysis of the utilization of HP-VHI services and which estimates the disparities in utilization between population groups. The findings point to gaps based on region of residence for some of the services, even after controlling for other variables. However, it is important to emphasize that the study did not include data on the supply of services (such as availability which is measured by per capita number of physician hours per unit of time) or access (the ability and desire of a patient to obtain the available service). Therefore, the disparities across regions cannot be attributed directly to differences in availability or access to services. Moreover, there are relevant interplays between the public and private healthcare systems. Thus, policy in regard to NHI coverage, availability of and access to services affect the probability of using HP-VHI. For these reasons, it is difficult to explain and interpret the differences that were found between regions.

It was also found that there are additional factors associated with HP-VHI utilization, including age, health status, population group (Arab/ultra-Orthodox) and household size. Similarly, low levels of income and education predict a lower probability of using some of the HP-VHI services. It appears that HP-VHI's copayment creates economic barriers to HP-VHI utilization. This implies that low-income earners who pay HP-VHI premiums and do not use its services, are essentially subsidizing use by high income earners. This should be taken into account when considering interventions to reduce inequity.

The study highlights the following question: Is the role of HP-VHI to expand the public basket and to provide non-essential medical services or to improve availability of and access to essential services by expanding the choice of providers? The answer to this question will shed light on the way in which disparities related to population group and socioeconomic status should be dealt with.