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THE HEALTHCARE SYSTEM

Dov Chernichovsky

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Dov Chernichovsky is the Chair of the Health Policy Program at the Taub Center for Social Policy Studies in Israel and a Professor of health economics and policy at Ben-Gurion University. All errors are the author's own. The views expressed herein are those of the author and do not necessarily reflect the views of the Taub Center for Social Policy Studies in Israel.

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מרכז טאוב
לחקר המדיניות החברתית בישראל

סדרת ניירות מדיניות

מעכת הבריאות

דב צ׳רניחובסקי

נייר מדיניות מס׳ 2010.08

המשך העלייה בחלקו של המימון הפרטי בסך המימון של מערכת הבריאות והעלייה הנגזרת ממנה בהספקת השירותים הפרטיים הם המאפיינים המרכזיים של המערכת. המימון הפרטי מהווה היום כ-43 אחוז מסך המימון, האחוז הגבוה ביותר לאחר ארה״ב מבין המדינות המפותחות והגבוה ביותר מבין המדינות המעניקות לתושביהן ביטוח בריאות ממלכתי. ה״אמריקניזציה״ של מערכת הבריאות מתבטאת בשלב זה בגידול בפערים ובאובדן יעילות, הנמדד באינפלציה המתפתחת במערכת. מציאות זו עדיין איננה מתבטאת במודדים של בריאות הציבור. הפערים הגדלים בין ארה״ב, מצד אחד ומדינות ה-OECD המפותחות (ללא ארה״ב) מצד שני, עלולים לאותת על המצב הצפוי לישראל גם בתחום הישגיה בבריאות האוכלוסייה. על רקע זה בולטים מאמצי הקופות הגדולות להעמיק את פעילותן הממוקדת בנושאים של צמצום פערים.

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דב צ׳רניחובסקי הוא ראש התכנית למדיניות בריאות במרכז טאוב לחקר המדיניות החברתית בישראל ופרופסור למדיניות וכלכלת בריאות במחלקה לניהול מערכות בריאות באוניברסיטת בן-גוריון. *כל הטעויות הן של המחבר הדעות המובאות להלן הן של המחבר ואינן בהכרח משקפות את דעות מרכז טאוב לחקר המדיניות החברתית בישראל.*

המרכז נוסד ב-1982 ביוזמתם של הרברט מ׳ סונגר, הנרי טאוב, וארגון הג׳וינט האמריקאי. המרכז ממומן באמצעות קרן צמיתה שהוקמה על-ידי קרן הנרי ומרילין טאוב, קרן הרברט ונל סינגר, ג׳ין וג׳ון קולמן, קרן משפחת קולקר-סקסון-הלוק, קרן משפחת מילטון א׳ ורוזלין ז׳ וולף, וארגון הג׳וינט האמריקאי. למדע נוסף ראו taubcenter.org.il או בדוא"ל info@taubcenter.org.il.

The Healthcare System

Dov Chernichovsky*

Abstract

The key characteristics of Israel's healthcare system are the continued increase in the share of private funding in the overall funding of healthcare and provision of care. Private funding currently represents about 43 percent of the overall funding, the highest beyond the United States among the developed countries, and the highest among countries in which universal health insurance is legally guaranteed for all residents via National Health Insurance.

The "Americanization" of the Israeli healthcare system is reflected at this stage in growing gaps in access to care and loss of income protection as well as efficiency, which can be measured by the developing inflation in the system. This reality is not reflected as yet in public health indicators. The growing gaps between the United States and the 22 high income OECD countries in favor of the latter may be signaling what can be expected in Israel in terms of its achievements in the health of its population. Against this backdrop, the efforts by the large healthcare service providers to deepen their focused activities in closing the gaps stand out.

The trends characterizing the Israeli healthcare system for the past decade continue: an improvement in the health status of the population and of the Arab minority in particular, a declining percentage of public financing in healthcare spending, rising prices of care, and yet a

* Special thanks to Kyrill Shraberman of the Taub Center for assistance in data analysis and for preparation of the figures in this chapter.

stable share of healthcare expenditure in the gross domestic product (GDP) – the overall value of goods and services produced by the economy over a year.

In this chapter these trends and their underpinnings are examined in detail and a comparison is made with long term developments in the countries of the Organization for Economic Cooperation and Development (OECD) of which Israel has recently become a member. The analysis aims to examine the system's performance in terms of the health of the population while considering the system's efficiency and equity. The long term comparison with the 22 high income OECD countries, excluding the U.S., on the one hand, and the U.S., on the other,[1] is of special significance. This comparison is an indicator of things to come in the Israeli system if efforts are not undertaken to counter the current situation.

The health of the Israeli population, as reflected in infant mortality and life expectancy indicators, is presented in the first section of the chapter, which highlights continued, albeit narrowing, discrepancies between the Israeli Arab and Jewish populations. The thrust of the second section is the changing composition of funding of the system, which makes the challenge of narrowing these and other disparities even greater. Regardless, there will always remain a "social periphery," relatively weak population groups requiring concentrated attention and efforts. This topic is treated in the third section, which discusses investment made in this periphery by the two largest sick funds (HMO type entities) *Clalit Health Services* and *Maccabi Health Services* that between them insure about

[1] In most cases, comparisons were done with the OECD countries excluding the United States and a separate analysis was done against the United States. Countries included in the comparisons were: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, South Korea, Luxembourg, Holland, New Zealand, Norway, Spain, Sweden, and United Kingdom (OECD-22 hereafter). Not included in the comparison were the following countries – Turkey, Mexico, Czech Republic, Slovakia, Hungary and Poland – which are not considered comparable to Israel in terms of medical technology.

80% of the Israeli population. In this section a short review of the special activity of the Southern District of the Ministry of Health in the area of prevention services aimed at the Bedouin population in the Negev is also highlighted.

1. *Life Expectancy and Infant Mortality Trends*[*]

Life expectancy in Israel rose since 1980 compared to the OECD-22[2] average and compared to the United States. Whereas in 1980 the gap between Israel (73.9), the United States (73.7) and the OECD-22 average (74.0) was negligible, the gap between Israel and the United States kept widening, in Israel's favor. In 2006 the figures were 80.3 in Israel compared to an OECD-22 average, excluding the United States, of 79.9, and with 77.8 in the United States.[3]

However, the life expectancy of the Jews in Israel has been consistently higher than that of Israeli Arabs.[4] Currently there is a gap of slightly less than four years between the life expectancy of Israeli Jews (81.6) and Arabs (77.8)[5] (Central Bureau of Statistics (CBS), 2009: data for 2008). The difference can be seen in Figure 1, indicating the size of gaps.

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[*] This section was written in collaboration with Nadav Davidovitch of Ben-Gurion University and Kyrill Shraberman of the Taub Center. The English version was modified by Ilana Belmaker.

[2] See footnote 1.

[3] These Israel statistics present the overall average.

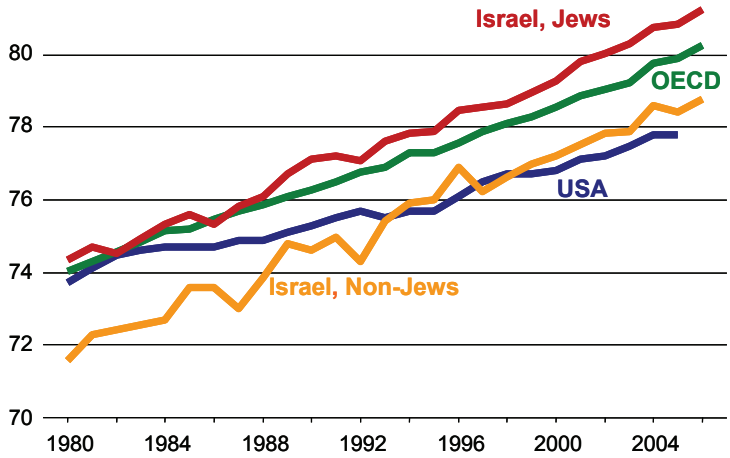
[4] The non-Jewish population in Israel includes a large majority of Arab Muslims and in addition Arab Christians, Druze, Bedouin, Circassian and a very small number whose religion is not specified. The term *Arabs* or the *Arab population* allows a general reference in the chapter as was done in previous chapters in this book and avoids the negative terminology of non-Jews for this population. In certain cases there is a reference to specific groups within the Arab population, as in the case of Bedouin in the Negev, and others.

[5] Life expectancy statistics are usually published separately for men and women. Current data ((CBS), 2009: data for 2008) show a gap of four years between Jewish men (79.9) and Arab men (75.9) and smaller differences, of less than four years, between Jewish women (83.3) and Arab women (79.7).

Figure 1

Life Expectancy

Israel, OECD-22* and USA, 1980-2006



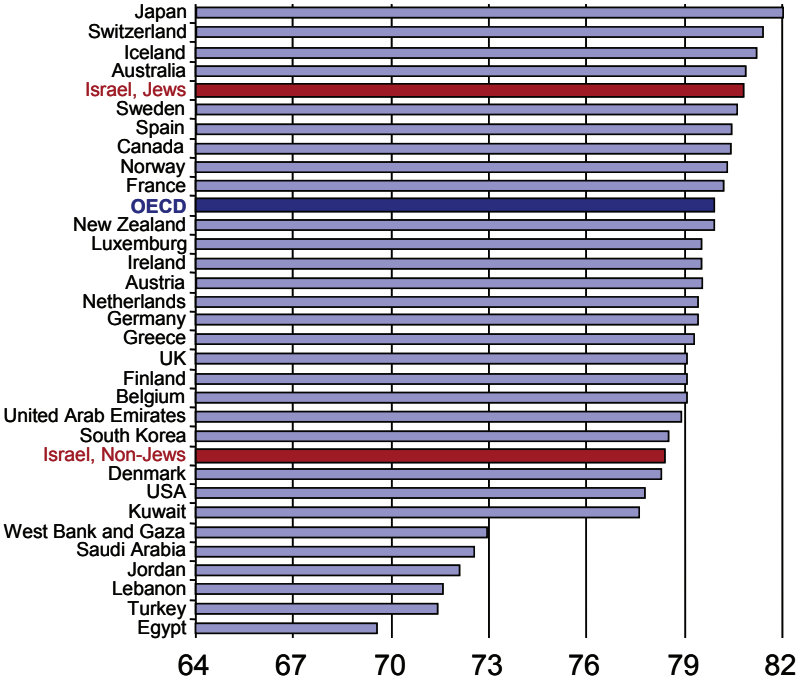
* OECD average excluding USA.

Source: Taub Center for Social Policy Studies in Israel.
Data: Central Bureau of Statistics (CBS); OECD.

From 1999 onward Israel's life expectancy has been considerably higher than the OECD average. Furthermore, the life expectancy of Jews alone puts Israel on par with the nations with the highest life expectancy. The rank of non-Jews in Israel is higher than the neighboring Arab countries (except the United Arab Emirates) and even than the United States (see Figure 2 for comparative data for 2005).

Figure 2

Life Expectancy, 2005



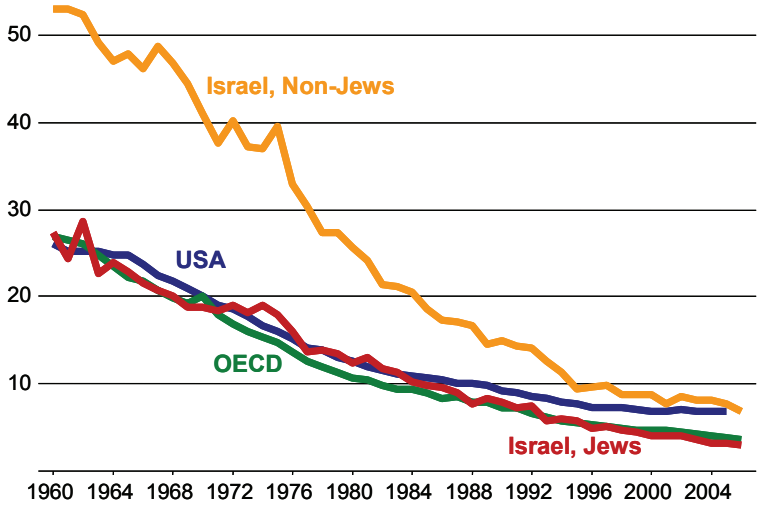
* OECD average excluding USA.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, OECD.

The differences between population groups reflected in Israeli public health indicators are indeed particularly striking between Israeli Arabs and Jews, and above all in infant mortality. In 2005, infant mortality in Israel was relatively high (4.4 per 1,000 live births) versus the OECD-22 average of 3.9 per 1,000 live births for the same year. Infant mortality was lower than in Israel in 14 countries that year, including Austria, Ireland and Germany (4.2, 3.9 and 4.0 per 1,000 live births, respectively).

Figure 3

Infant Mortality*, 1960-2006



* Infant mortality, deaths per 1,000 live births; OECD average excluding USA.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, OECD.

Infant mortality rate in Israel's Jewish population (3.1 per 1,000 live births in 2005) is among the lowest in comparison with Europe and the OECD. This rate is similar to that of countries like Norway, Finland and Japan (3.1, 2.8 and 3.0 per 1,000 live births, respectively), and lower than the OECD average (3.9 per 1,000 live births).

At the same time, infant mortality in the Israeli Arab population (8.0 per 1,000 live births in 2005) is significantly higher than country-wide infant mortality rates in all European and OECD countries as well as the United States (6.9 per 1,000 live births). A similar rate of infant mortality is found in other Middle East countries: the United Arab Emirates and Kuwait (7.8 and 9.7 per 1,000 live births, respectively).

An examination of the trend from 1960 until 2007 shows that infant mortality in the Israeli Arab population is on a course of significant decline, currently nearing the rate of infant mortality in the United States (6.9 per 1,000 live births in 2007). In 1960, infant mortality in the Israeli Arab population was more than twice that of the United States: 52.9 per 1,000 live births versus 26.0. Compared to other Middle Eastern countries the rate of infant mortality of Israeli Arabs is low.

An adequate policy for narrowing the existing gaps in Israel should take into account the fact that the Israeli Arab population is not homogeneous and that significant differences exist among different groups. Thus, for example, in 2003, when infant mortality in the Israeli Arab population as a whole was 8.2 per 1,000 live births, the following disparities were found: among the Muslims, infant mortality was 8.6 per 1,000; among the Christians, 3.2 per 1,000; and among the Druze, 7.1 per 1,000. Again, this is compared to 3.6 in the Israeli Jewish population (Ministry of Health, National Center for Monitoring Diseases, 2005).

Between the years 1970 and 2003 infant mortality rates underwent an accelerated decline in all Israeli Arab subgroups. Among the Muslims it dropped by 78.6 percent, among the Christians by 89.2 percent, and among the Druze by 79.0 percent. At the same time the decline continued also in Israel's Jewish population, by 80.7 percent.

The main cause for infant mortality in the Israeli Arab population is birth defects (34.6 percent of deaths) and premature births (31.4 percent). In 2004-2006, 42.7 percent of deaths among Bedouins were caused by birth defects and hereditary diseases, and 22 percent by premature birth. The rate of infant mortality from birth defects in 2003 was 2.9 times higher among the Israeli Arab population than among Israeli Jews. Since 2004 there has been a decline in Bedouin infant mortality rates due to those two causes.

The Bedouin in the Negev, the southern region of Israel, need particular attention. The infant mortality rate in this group was 11.9 per 1,000 live births in 2006 compared with 7.3 per 1,000 live births in the overall Muslim population in Israel and 4.0 per 1,000 live births in the

overall population. This rate was 1.6 times that of the overall Muslim population in Israel and 3.0 times that of the overall population in Israel (CBS, 2009: Yearbook No. 60). Between 2001 and 2007, infant mortality declined among the Negev Bedouins, but the gap between them and the overall Muslim population in Israel and the Jewish population remains high.

2. *Funding the Healthcare System*[*]

In general, a rise in life expectancy especially in developed nations is an indicator of the system's ability to cope with health disparities between its various population groups. This can be seen in Israel's long term rising life expectancy rates in all populations groups and the narrowing of health gaps.

The developments described earlier – especially the declining **relative** life expectancy in the United States – provide the backdrop for the discussion of the "Americanization" of funding of the healthcare system in Israel throughout this chapter. The changes indicated by the funding data below might test the continued positive relative trend in Israel as well as the trend of narrowing health gaps among different populations.

Much was written in recent years about the decline in the share of public expenditure in the overall funding of the healthcare system (Bin Nun, 2008; Chernichovsky, 2007; 2008). The decrease is directly reflected in reduced access to services and lower protection of household budgets from mostly necessary medical spending. Although this decline has continued for 10 years already, it is not yet likely to have a visible impact on public health indicators such as infant mortality and life expectancy. With the exception of dramatic events, the impact on those indicators of reduced access to services or increased vulnerability of

[*] This section was written in collaboration with Guy Navon from the Bank of Israel, and Dr. Ronni Gamzu who has since been appointed Director General of the Israeli Ministry of Health.

household budgets to high medical expenses is slow and only detected after a long time, as might be suggested by the widening relative differences seen between the United States and other developed countries including Israel. At the same time, related indicators of system efficiency and equity can be detected faster. These can be precursors to eventual impact on health.

The comparison of Israel with the OECD-22 (excluding the United States) on the one hand, and with the United States on the other hand, is of particular interest considering the inferior performance of the American system compared to those of the other countries, by any indicator (Davis et al., 2007; Schoen et al., 2006; 2007) – despite the United States' technological superiority and the greater resources invested there in the healthcare.

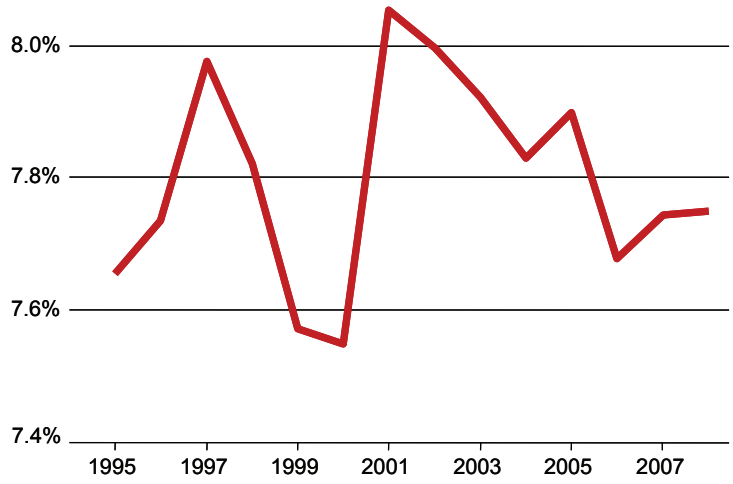
2.A. *National Expenditure for Healthcare*

The national expenditure for healthcare services in Israel in 2008 was 7.7 percent of the GDP (Figure 4). On the whole, since the introduction of the National Health Insurance Law (NHIL) in Israel, healthcare expenditure to GDP remained relatively stable in a long term perspective. The 2001 "peak" was apparently a decline in economic output without a parallel decline in the national expenditure for healthcare services.

Figure 4

National Expenditure on Health

as percent of GDP, 1995-2008



Source: Taub Center for Social Policy Studies in Israel.
Data: CBS.

Adjusting all data to Israel's age distribution for over 40 years, Israel's share of healthcare expenditure in the GDP followed that of the OECD's 22 industrialized countries. During most of the period, the ratio in Israel was even higher than the OECD-22 average (Figure 5), especially since the introduction of the National Health Insurance Law in 1995. In 2007 Israel's ratio was equal to the OECD average, and there are initial signs this year of a decline. This, however, does not necessarily indicate a turning point or a trend change.

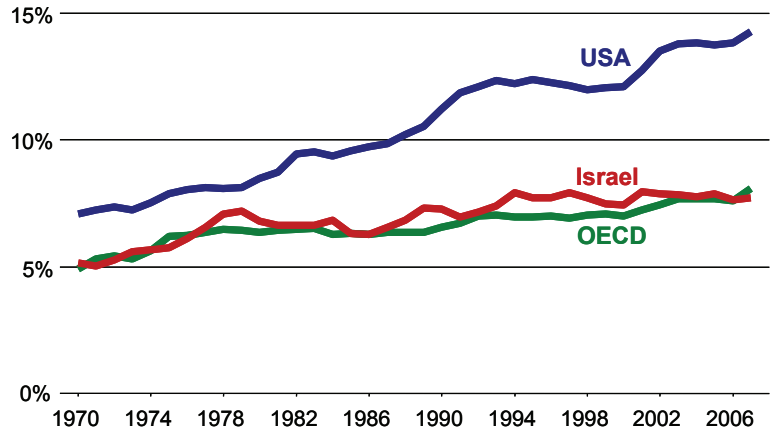
For a long time, therefore, the share of the national product dedicated to healthcare services in Israel has been close to that of the other developed countries that provide national health insurance. Both in Israel and the OECD-22 the shares have been lower than that of the United

State. The growing divergence of this ratio, from the 1980s, between the United States and the other industrialized countries, including Israel, is particularly sharp.[6]

Figure 5

National Expenditure on Health*

1970-2007



* Adjusted for standardized population, as percent of GDP per capita.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, OECD.

6 With reference to the relatively high expenditure of the U.S. on healthcare, its separation from the full list of OECD countries and concentration on countries with universal healthcare (including Israel, even before the implementation of the National Health Insurance Law) improves the relative standing of Israel.

2.B. *Average Per Capita National Expenditure for Healthcare*

At least since 1995 there is a correlation, before adjusting for relative inflation in healthcare prices, between changes in Israel per capita GDP and changes in the national expenditure for healthcare per capita – and even per standard person,[7] adjusting for the aging population (upper lines in Figure 6). This finding is in line with the international comparison, which shows Israel's relative consistent share of healthcare expenditure in the GDP, which is similar to that of the OECD-22. That is, the expenditure for healthcare services, even per age-adjusted person, normally rises at the same rate as the GDP.

However, as of 2001, relative inflation in the healthcare system had an increasing impact on the cost of healthcare services compared with product prices (see box). Adjustment to relative inflation indicates that the real expenditure per age-adjusted person was at best constant as of 1999 (Chernichovsky, Navon, 2010). Inflation since then has neutralized the effect of the rise in real expenditure (adjusted for average prices) per age-adjusted person, and reflects first and foremost rising labor costs in a labor intensive industry, and declining efficiency.[8]

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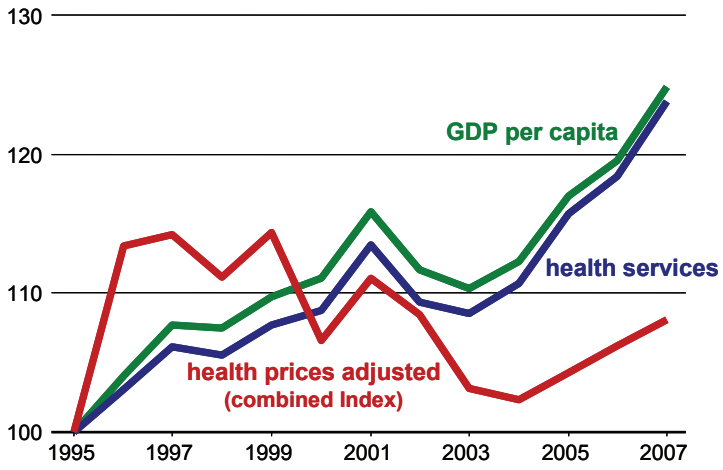
[7] The term "standard person" gives a differential weight per person by age in the population according to healthcare services usage, and builds an appropriate scale that is age adjusted. For instance, the elderly, those aged 65+ and the youngest members of the population aged 0-4, are given more weight reflecting their higher needs for healthcare services. The capitation formula that is used for resource allocation from the State to the service providers is based on age adjusted formulas.

[8] It is reasonable to assume that higher prices reflect also quality of care and different services, including shorter waiting periods. There is no reason to assume, though, that relative inflation expresses this because there is no reason to assume that changes in technology are greater in the medical area than in other areas and that their influence is dominant in a labor intensive sector.

Figure 6

Health Expenditures*, 1995-2007

constant prices, base year 1995=100



* Adjusted for standardized population.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS.

Relative Inflation

Inflation is a process of price increases per a standard product unit. A price increase can reflect a change of quality but it can also happen without change in quality. In such a case it indicates a loss of efficiency, since it reflects a higher production cost for the same product and lower purchasing power for a given income. Also, inflation harms equity, being a "tax" that does not differentiate among income groups.

A relative price change reflects a change in the price of one good or service, or basket of goods and services, such as medical care, relative to the price change of a different basket or even income. When there is relative inflation, one can buy less of the same product or basket due to the increased price, unless the buyer diverts income from other consumption in favor of the purchase of the same quantity of that product or basket.

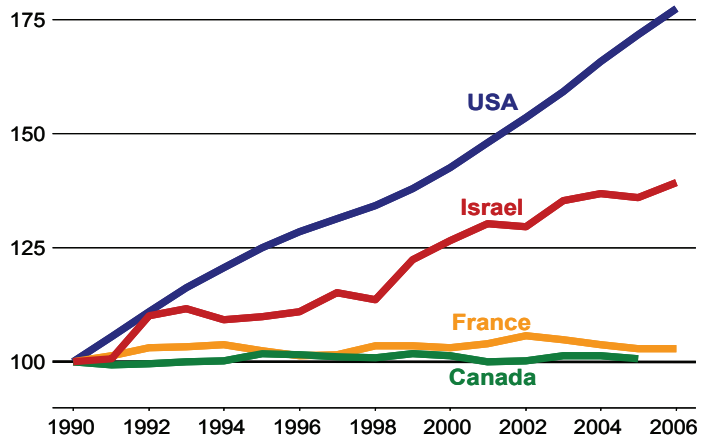
The development of Israel's real healthcare expenditure per standard person can be divided into four periods: 1995-1997, during which time a "surge" took place in this indicator following the introduction of the National Health Insurance Law (NHIL); 1997-1999, which were years of relative stability; 1999-2004, when the beginning of a downward trend was observed; and 2004-2007, when there were moderate increases. For the most part, the last decade is characterized by a trend of decline in the real expenditure on healthcare services, or in the quantity of healthcare products and services per age-adjusted person, due to the relative inflation in the prices of the service.

Organized and comparable data for relative healthcare services price increases in the relevant OECD countries are not available, except for France and Canada, which are not necessarily representative (see Figure 7). Nonetheless, it is hard to ignore the clear difference between France and Canada on the one hand, and Israel on the other hand, with the process of "Americanization" of Israel's healthcare services price trend, especially over the past decade.

Figure 7

Health Prices

relative price indices, 1990-2006



Source: Taub Center for Social Policy Studies in Israel.
Data: CBS.

2.C. *Funding Sources and Sharing the Funding Burden*

Examination of healthcare funding sources and the division of the healthcare funding burden touches on the public/private mix, the composition of public funding, and the composition of private funding.

The Public/Private Mix

Private funding in Israel includes supplemental insurance which has "public" characteristics in that sick funds are obligated to accept any applicant without a waiting period, the premium is uniform for an age group and services are provided in-kind (Chernichovsky, 2008). Even so, complementary insurance is considered in this discussion as a private expense.

According to the Central Bureau of Statistics' new series (2009), the share of public funding of healthcare services declined from 68.7 percent of the overall healthcare expenditure at its peak, to 55.8 percent in 2008 (Figure 8). Although the new series still shows the upward trend in the share of private funding, the series is more correct in ranking Israel lower than the OECD countries than the previous series.

Although in 1995-2007 the share of public funding in Israel's healthcare system was lower than the OECD average (excluding the United States), the difference narrowed in 1995-1996, after the introduction of the NHIL, at which time Israel joined the developed countries that guarantee universal coverage. Since then, however, Israel has been shifting increasingly from the OECD (excluding the United States) average of the public share in funding to the United States public/private mix model of funding the healthcare system. That is, as of 1997, the rise in per capita healthcare expenditure in terms of product prices was funded by increasing the private expenditure, while the public per capita healthcare expenditure in product prices remained constant (Figure 9).

Figure 8

Public Share in Health Expenditure

as a percent of national expenditure, 1995-2007

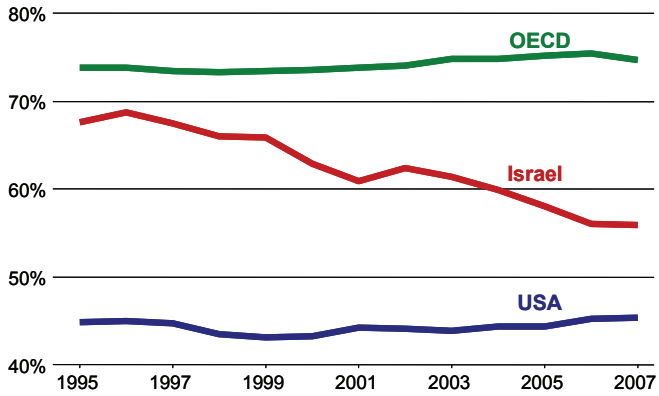
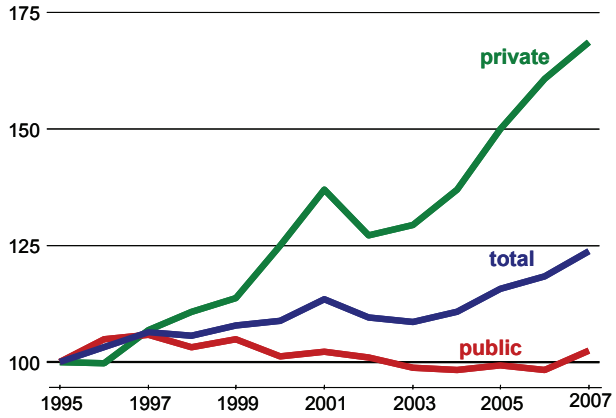


Figure 9

Health Expenditure Per Standard Person

constant prices, base year 1995=100



Source for Figures 8 and 9: Taub Center for Social Policy Studies in Israel. Data: CBS, OECD.

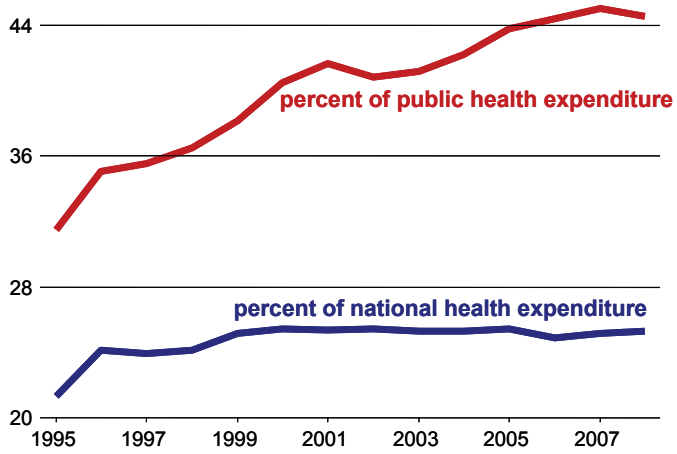
Composition of the Public Funding

The public funding of healthcare is composed of an appropriation from the State budget and proceeds of the "healthcare tax" collected by the National Insurance Institute. Over the years the share of the "healthcare tax" in the overall public healthcare expenditure increased (Figure 10) from 31.5 percent of the overall public expenditure in 1995 (when the national healthcare insurance was introduced) to 44.6 percent in 2008.

Figure 10

Healthcare Tax, 1995-2008

as percent of national and public health expenditure



Source: Taub Center for Social Policy Studies in Israel.
Data: CBS.

Composition of the private funding

Between 1997 and 2007, households' private funding of healthcare services increased by 103 percent nominally (7.6 percent on average annually), while their expenditure for consumption rose, for the same period, by 43 percent (3.6 percent on average annually) (CBS, Survey of

Household Expenditures, for 1997-2007). The relative increase in healthcare expenditure increased the share of private expenditure on healthcare as a percentage of the overall expenditure on consumption – from 3.8 percent in 1997 to 5.3 percent in 2007.

The increase in the nominal private expenditure on healthcare services was not uniform over the period. Table 1 shows the change in private expenditure for healthcare services and the components of this expenditure in 2007 compared to 1997. During that period the spending on healthcare insurance rose substantially and the number of people insured increased. This has been reflected in an average annual increase of 16.4 percent of the healthcare coverage and in 2007, private funding reached 26 percent of the overall households' private expenditure for healthcare services. A more moderate increase occurred in spending for other private healthcare services, primarily medications.

The increase in private expenditure for healthcare services for the decade 1997-2007 stems primarily from the price increases in the healthcare system. Over that period there was an average annual quantitative increase of 3.2 percent[9] and a 4 percent price increase (in terms of the CBS Healthcare Price Index, which pertains to private expenditure). The increase in healthcare prices over that period was higher than that of the Consumer Price Index, which rose by an annual average of 2.3 percent. The sharp increase in spending on healthcare insurance, for instance, primarily reflects a rise of 11.2 percent in the amount along with a 4.7 percent in price increases. This is only slightly higher than the overall healthcare price increase (four percent on average).

[9] The difference in amount, in price and in total expenditure is calculated on the basis of the geometric multi-year average for 1997-2007.

Table 1. **Change in Private Expenditure for Healthcare and Its Components Per Standard Person**
by the Capitation Formula, 2007 versus 1997 – annual geometric average (percent)

	Total health services	Health insurance	Dental health	Medical services*	Other health expenditures**
Weight in 2007	100.0	26.0	28.0	13.0	33.0
Weight in 1977	100.0	11.0	38.0	17.0	34.0
Overall change (amount x price) ***	7.1	16.4	4.1	4.6	6.8
Increase in amount	3.0	11.2	0.4	0.6	3.3
Increase in prices	4.0	4.7	3.7	4.0	3.4
Relative increase in prices	1.8	2.4	1.4	1.7	1.1

* Primarily expenditures on surgery, psychological and psychiatric treatment as well as child development care.

** Primarily expenditures on medicines (the terminology is that of the CBS).

*** Overall change is the result of the change in prices multiplied by the change in the amount.

Source: CBS, *Household Expenditure Survey*, various years. (The change in prices was calculated on the basis of the Health Price Index and price indices for expenditures in the survey.)

Undoubtedly, a price increase also represents technological change or improvements in treatment quality. In this context it should be emphasized that price changes are relative to the consumer price index. That is, assuming that technological and qualitative improvements are the same across all sectors, products and services, it can be assumed that relative price changes in the private healthcare expenditure reflects a loss of efficiency in healthcare services.

Overall Changes in Funding Composition

The overall changes in the composition of funding for the healthcare system in Israel from 1997 to 2007 are shown in Table 2. Considering the relative decline of public funding sources for healthcare services, especially their share of the overall budget, there is an increase in private funding of healthcare services by households, primarily through complementary insurance or semi-public funding.

Table 2. **Changes in the Composition of the Healthcare System in Israel, 1997 and 2007** (percent)

	1997	2008
Total	**100.0**	**100.0**
State budget	38.1	29.6
Health tax	26.2	25.9
Household expenditures	33.1	42.2
Donations	2.6	2.3

Source: CBS, 2009. *Statistical Abstract of Israel*, Number 60, Table 6.3.

2.D. *Impact of Changes in Funding Composition on Medical Fields*

Given the healthcare system's political economy – the link between sources and types of funding and the system's organizational structure – changes in funding sources affect spending on specific healthcare items.

The "Ministry of Health Basket" versus the "Sick Fund Basket"

The growth of healthcare expenditure was the result of voluntary supplemental insurance replacing public funding. The latter does show a relative increase of funding from the healthcare tax earmarked for the basic basket. The complementary healthcare insurance, like the healthcare tax, pertains primarily to the basic basket of services provided by the sick funds. Conversely, the "Ministry of Health's basket" (for preventive medicine, behavioral medicine, and chronic diseases) comes

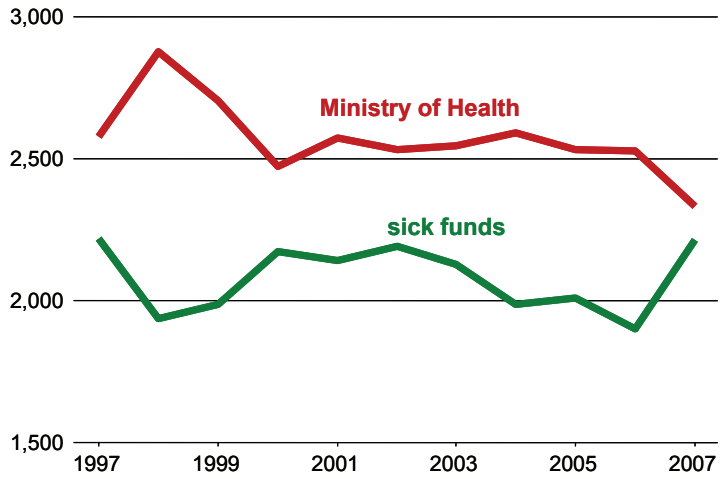
exclusively from the general budget. Consequently, it is important to analyze the hypothesis that the share of the Ministry of Health's basket in the general budget is more exposed to decline in the funding of the system, at least in relative terms.

Beginning in 1998, after the introduction of the first Economic Arrangements Law, which accelerated the growth in complementary insurance, expenditure for the "sick funds basket" rose until 2000-2002 while expenditure for the Ministry of Health basket declined (Figure 11).[10]

Figure 11

Public Health Expenditure Per Standard Person*

1995-2007



* Adjusted for 2007 health inputs prices.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, Ministry of Health.

[10] The decline in the State funding per standard person in the basic sick fund basket against the stability in funding per standard person that the Ministry of Health allows, most certainly, came through cutbacks or State subsidies in general hospitalization, including a reduction in investment in infrastructure.

Later on expenditure for the Ministry of Health basket stabilized while expenditure for the sick funds basket showed a downward trend until 2006. As of 2006, the downward trend of the Ministry of Health basket accelerated, while the trend of the sick funds basket improved. Since this expenditure is made in labor intensive areas, relative decline in Ministry of Health per capita expenditure implies the lack of growth in investments in preventive and mental health care with ensuing damage to the healthcare infrastructure as a whole.

Dental Care and Other Private Medicine

Despite the sharp increase in 1997-2007 in the share of complementary healthcare insurance in households' expenditure, expenditure on dental care is still the main item in this expenditure (Table 3). Dental care, which is almost entirely funded by private expenditure, is the most vulnerable to changes in the private expenditure in favor of other expenditure items.

Table 3. **Per Capita Expenditure, Capitation Standardized, by Components,** as percentage of the expenditure for healthcare services, 1997 and 2007 (percent)

	Health insurance	Dental health services	Private health services	Other services	Thereof: medicines
1997	10	35	15	31	16
2007	26	28	13	33	20

Source: Data analysis of CBS, *Family Expenditure Survey*, 1997-2007, p. 19.

According to the data, part of the growth in complementary insurance may have come at the expense of dental care, the share of which in the overall spending declined from 35 percent to 28 percent. This leads to the question whether the changes in funding composition is further damaging for healthcare components (like dental health care) which are already weak (Horev and Mann, 2007). The data supporting the hypothesis that the relative increase in voluntary insurance might be damaging the

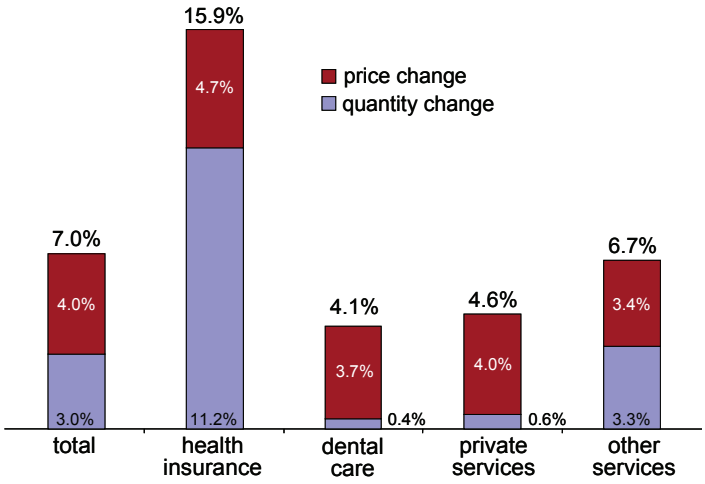
relative increase in dental care is further corroborated by the inflation data in dental care (Table 1 and Figure 12).

There are two more important points in this context: One is that only 6.9 percent of households report that they have dental care insurance (according to family expenditure surveys). The other is that most of the expenditure on complementary insurance goes to the items "choice of physician" and "medicines" (Ministry of Health, 2007).

Figure 12

Changes in Private Expenditure on Health*

by components, 2007 compared to 1997



* Per standard person.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS.

2.E. *Conclusion – Efficiency and Equality Erosion and Possible Damage to Public Health*

While expenditure for healthcare services per standard resident in Israel grew over the past decade, the resident does not necessarily receive more services, other than those incorporated in technological advances. Clearly, there is a loss of efficiency and welfare in higher expenditure that does not reflect a real increase (and possibly even a decrease) in the level of service. In addition, as in any inflation, other efficiency components are also damaged, such as equality and economic growth.

***Equity**:* From the perspective of the funding, or the vertical equity, inflation is a regressive tax, since it applies to all social strata without distinction. This has a negative impact, which is further compounded by the more regressive funding of the system implicit in the growing private funding component in the overall funding of the healthcare system. These regressive impacts are somewhat mitigated by the rise in the share of complementary insurance which has the semi-public feature. Such substitution for public funding is not sufficient to counteract significantly the increasingly regressive funding of the system. The funding of the healthcare system in Israel over the past decade exacerbates the distribution of income and consumption in the economy, without providing much (or any) additional per capita services. Furthermore, private expenditure for healthcare services, including voluntary insurance, increases the proliferation of households joining the poverty circle (Chernichovsky, 2008).

As for access to services or horizontal equity, the relative inflation in the prices of healthcare services, especially private services, is causing a decrease in access to services, which is already damaged by the decrease in public funding.

Efficiency: As stated, the inflation in healthcare services implies first and foremost a loss of efficiency in the production of medical services. The changes in funding bring additional potential negative impact on efficiency in the production of health. Increased expenditure for

healthcare services causes households, especially those of the elderly and families with limited resources, to avoid consumption even of health promoting items such as food.

The rise in the share of private funding and the less progressive public funding are coupled, therefore, with a decrease in the system's potential for equity, and with possible damage to the health of the population. Furthermore, given the institutional structure of funding healthcare services, changing the composition of funding sources might have a potential negative impact on the system's infrastructure, preventive medicine, as well as mental health and dental care.

3. *Investment in the "Social Periphery" for Closing Gaps in the Area of Healthcare*[11]

"Social periphery" is a multi-dimensional term representing a number of population features: limited access to services (including healthcare services); remoteness from centers of economic activity; remoteness from sources of political power and influence; high burden of morbidity and unique morbidity patterns; low socioeconomic status compared to the general population or the region; and a low level of social-communal cohesion, which is reflected in the scarcity of communal support networks and lack of communal leadership. There may be some overlap in the features of geographic and social peripheries.

The large sick funds (HMOs) continually monitor the features of their member populations, and findings on those indicators were used to design and implement their strategies for reducing healthcare disparities.

Clalit Health Services initiated a gap-closing program which began by identifying intervention centers within the fund's population, continued by defining the targets for gap closing, and was completed with the

[11] This section is based on a paper prepared by the two largest sick funds, "*Clalit* Health Services" and "*Maccabi* Health Services" – see what follows. For the term "social periphery," the paper by *Maccabi* Health Services was used.

design of a strategy on the various levels of management during 2007. Strategy design was based on the existing infrastructure of the sick fund's database, health promotion teams in primary clinics in the community, as well as a widespread system of quality measurements. The program presented in Section 3.A. was launched in 2009.

Maccabi Healthcare Services initiated in 2008 a process of measurement and analysis in a number of areas of the connection between characteristics of the insured and clinical service received. The analysis was first presented as a report on equity in healthcare (June 2008), on the basis of which the fund designed a healthcare gap-closing strategy among members (see Section 3.B.)

3.A. *Clalit Health Services*[*]

Clalit is the largest healthcare provider and insurer in Israel, covering 53% of the Israeli population. In 2007 *Clalit* Health Services put into practice a multi-year strategic plan for closing gaps in health and healthcare provision. The plan was designed to continue responding to unique needs of different population groups, and provide a comprehensive and universal response to the issue of healthcare disparities. The plan relies on the benefits of the existing infrastructure, which include an exclusive electronic data-warehouse, health promotion teams active in primary community clinics, and a wide range of quality benchmarks, based on a unified management computerized systems with

[*] This section was prepared by Dr. Ran Belicer, Director of Planning and Health Policy, and Dr. Orit Jacobson, Deputy Director-General and Director of Community Health Division in the *Clalit* Health Services. The authors are grateful to Dr. Efrat Shadmi for her help in preparing the conclusion, to the staff of the planning department and the medical and long term care departments in the community health division for their help in planning and implementation of the program, and to the teams for their untiring work in narrowing health gaps in the framework of this program.

full coverage of a single type of electronic medical record in the community.

The strategy has a number of stages: identifying and quantifying the gaps, conducted during 2007; setting up an organizational steering committee; identifying key areas of disparity and creating awareness of them on all levels of the organization; quantifying the gaps and setting clear targets for closing them; collaboration between headquarters and community teams for creating incentives. All of this was done while ensuring the management's involvement, including a continuous involvement of the CEO.

Socioeconomic Portrayal of Clalit Health Services Members

Among those insured by *Clalit* Health Services, there is a particularly high representation of socioeconomically deprived population groups, including Israeli Arabs, Bedouins, periphery residents, elderly and disabled persons (Horev and Kop, 2008). The social and economic situations of these deprived groups comprise the major determinants of their health status and extend beyond the scope of the health care realm. Nonetheless, *Clalit* has undertaken many focused efforts to improve the health situation in underprivileged populations, including better access to services, health education, health promotion, and focused initiatives among special populations (Maislos, Weisman, & Scharf, 2002). In this phase of the strategic process, a detailed report on various aspects of disparities in health and healthcare services was generated and brought to the attention of the organizations top management.

Disparity Reduction Efforts – Planning and Implementation Processes

- ***Background – Identification of Gaps in Quality Indicators*:** The indicators used in this initiative were chosen from about 70 qualitative markers frequently used by the sick funds. The chosen indicators had to reflect differences between clinics serving low and high socioeconomic populations.

- ***The Chosen Indicators*:** Seven indicators were selected, including outcomes of disease control – diabetes, hypertension, hyperlipidemia, and infant anemia prevention; and performance measures – flu vaccines, mammography, and occult fecal blood tests. A summary index was constructed representing a weighted score of attainment on the selected indicators. Targets were set for closing disparities between selected clinics which were rated low on the 7-indicator summary score and all other clinics in each district.
- The goal was defined as achieving full (100%) elimination of the gap in the index score between the targeted clinics (55 clinics serving about 10% of *Clalit's* population) and all other clinics within three years.
- ***Implementation of Intervention in the Field*:** Several types of interventions were implemented by the clinics involving the following aspects: (1) Improvement of management and leadership skills; (2) Improvement of access to services, including preventive medicine; (3) Proactive initiatives for identifying and summoning patients in need of preventive treatments and follow-up; (4) Training aimed at improving cultural competence and community involvement, including the use of interpreters and bridge-builders, and involving religious and community leaders to adjust and market health promotion programs to specific populations.
- ***Outcome and Conclusion*:** A clear trend towards narrowing the gaps between target clinics and all other clinics was detected, as well as general improvement in quality indicators since the project was launched in 2009. In the second and third quarters of 2009, the targeted low-performing clinics improved at a pace nearly double that of the same period a year earlier, at the same time that non-targeted clinics improved at a constant pace. While the original goal was to close 25 percent of the gap within six months (so as to close it completely within 24 months), over the first six months of the project the gap between the 55 targeted clinics and the rest of the medium-to-large sick funds clinics dropped further. This change, above and

beyond the original goal, was achieved without affecting the non-targeted clinics' regular and ongoing improvement of the quality score.

It is important to point out that quality indicators that were not included in this project's combined index were not marginalized. Overall quality assessment of change in total quality (i.e., examination of the 70 quality indicators and not merely the 7 under focus) showed that multi-dimensional quality improvement occurred in the 55 target clinics at a twice as high rate on average, compared to all other clinics in each district. This quality gap minimization trend was observed together with an overall trend of improvement in quality in all clinics, indicating that minimizing the gap occurred at no expense to the continuous overall improvement in performance of the more than 500 *Clalit* medium and large clinics. As rapid quality improvement in clinical aspects of care was taking place in the 55 clinics serving underprivileged populations, and *Clalit*'s enrollees were noticing and appreciating these intense improvement efforts – patient satisfaction surveys showed that in districts serving the periphery, in which the greatest gap-closing took place, satisfaction levels among the intervention clinics improved significantly.

A detailed summary of this strategy, its implementation and detailed assessment of its outcomes in various aspects of health and healthcare measures are currently in the publication process, and thus were not further detailed here.

3.B. *Maccabi Healthcare Services*[*]

In 2008, *Maccabi* management decided to design a comprehensive, multi-year organizational plan to promote equality in the healthcare services it provides for its members, as well as the health outcomes they obtain. In the first stage, associations between *Maccabi* members' socio-demographic characteristics and their healthcare outcomes were studied. The purpose was to identify disparities, characterize the populations at risk for inequality and recommend an action plan.

The basis for mapping the disparities consisted of *Maccabi* Health Services' information system data, updated for year-end 2008, which includes all of *Maccabi* Health Services' adult members. The member population was classified and ranked socioeconomically, based on the 1995 census, by statistical geographic region on a scale of 1 to 20. The health indicators used reflect chronic morbidity and quality of care.

Socioeconomic Portrayal of Maccabi Health Services Members

Among *Maccabi*'s five Districts, the Northern and Southern Districts – Israel's peripheral regions – stand out with a relatively high percentage of members belonging to the lower socioeconomic clusters and a greater share of new immigrants from the former Soviet Union (who arrived from 1989 onward). The Northern District, as in Israel's demographic distribution, is characterized by a high percentage of Israeli Arab population, whereas the Southern District is characterized by a high percentage of people living in poverty: one-quarter of Southern District members belong to the lowest socioeconomic cluster, and only seven

[*] This section was prepared by Dr. Rachel Wilf-Miron, Orna Shem-Tov and Dr. Einat Yaari, of the Quality Management Department; Prof. Avi Porath, CMO; and, Prof. Ehud Kokia, CEO of the *Maccabi* Health Services. It is based on the *Maccabi* Report (2009): *Toward Equity in Healthcare*, *Report No. 1* – Gaps in Health – A Picture of the Situation and Directions for Action, that was prepared by Wilf-Miron, Shem-Tov and Yaari with the contribution of Irena Levinhoff, Anna Viner and Malka Avitzur.

percent of members in the Southern District belong to the highest socioeconomic cluster.

Overall, 13 percent of *Maccabi* members do not purchase complementary health insurance; 15 percent are new immigrants; nine percent belong to the lowest socioeconomic cluster (levels 1–5), and 26 percent belong to the highest cluster (levels 16–20). Most *Maccabi* members are concentrated in the two middle levels of the cluster ranking. The Israeli Arab member population included in the *Maccabi* Equity Report (2009) is about 40,000-strong and is relatively young. Most of this population (95 percent) is in the lowest 10 socioeconomic levels, and a high percentage has no complementary insurance.

Disparities in Health Indicators among Maccabi Members

The following population characteristics partially correlated to some or most of the health outcomes.

Socioeconomic Ranking: Sick fund members in the lower socioeconomic cluster (levels 1-5) showed greater prevalence of chronic diseases (diabetes and cardiovascular disease) as well as higher frequency of poor diabetes control and low rates of early testing for detection of colon cancer than members in the higher cluster (levels 16-20). Similar gaps – albeit less pronounced – were seen in adequate diabetes control and early detection of breast cancer. Thus, for example, the prevalence of diabetics in the lower ranks is 1.4 times greater among men and 2.1 times greater among women than in the higher ranks; the prevalence of heart diseases in the lower ranks is 1.2 times greater among men and 1.6 times greater among women. Poor diabetes control is twice as prevalent among lower cluster women compared to women in the higher clusters. The percentage of men in the low clusters undergoing colorectal cancer screening is nearly half (57 percent) that of men in the higher clusters. For women the gap in colorectal screening is narrower. The percentage of women undergoing mammography for early detection of breast cancer in the lower ranks is 88 percent that of women in the higher ranks.

In about half of the health indicators examined (such as follow-up examinations or control of cholesterol levels) no gaps were found to the detriment of low-ranking members. In three process indicators (performing tests) members of the lowest ranks performed higher than members from the highest ranks (see Table 4).

Table 4. **Rate Ratios of Low to High Socioeconomically Ranked Groups –** clinical performance measures, by gender and socioeconomic ranking, adjusted for age

Domain	Men	Women
Diabetes prevalence	1.40	2.10
Diabetes follow-up *	1.03	1.15
Adequate diabetes control – glycosylated hemoglobin < 7	0.90	0.90
Poor diabetes control – glycosylated hemoglobin > 9	1.70	2.00
LDL < 100 for diabetics	0.97	1.02
Cardiovascular disease (CVD) prevalence	1.20	1.60
Follow-up for CVD**	1.15	1.20
LDL < 100 for CVD patients	1.11	0.89
Pneumovax vaccination	0.95	0.93
Colorectal cancer screening	0.57	0.69
Mammography screening		0.88

* Diabetics who within the last year checked glycosylated hemoglobin, cholesterol, blood pressure, height, weight, protein/creatinine ratio, eyes, and feet.

** Patients with CVD who within the last year checked blood pressure, height, weight, and cholesterol.

***Ethnicity*:** Considerable gaps to the detriment of the Israeli Arab population were observed in the prevalence of diabetes and heart diseases and in health outcomes, especially those pertaining to adequate and poor diabetes control. Thus, for example, the prevalence of diabetes among Israeli Arab men is 1.5 times greater than among Israeli Jewish men; the percentage of Israeli Arab women with poor diabetes control is 2.2 times

greater than that of Israeli Jewish women. The percentage of overweight or obesity among Israeli Arab women is 1.5 times greater than that of Israeli Jewish women. Those gaps have shrunk but remained significant even after controlling for socioeconomic ranking. Thus, for example, the percentage of Israeli Arab women in the low ranked groups with poor diabetes control was 1.5 greater than that of Israeli Jewish women of the same ranked groups. These findings are in line with reports from Israel and abroad according to which gaps to the detriment of ethnic or racial minorities remain even after controlling for socioeconomic attributes. In some process indicators, such as testing for glycosylated hemoglobin or blood lipids, no gaps were found between the Israeli Arab and Jewish populations (see Table 5). The gaps to the detriment of the Israeli Arab population in *Maccabi*, especially those that are unexplained by the socioeconomic situation, deserve a more thorough investigation.

***Length of Residency*:** In the majority of health measures, no gaps were found to the detriment of new immigrants from the former Soviet Union when the immigration factor was controlled by socioeconomic and geographic factors. It should be noted that immigrants from Ethiopia or other countries were not included in this analysis.

***Complementary Health Insurance (CHI)*:** The percentage of members without CHI is more than five times greater in the low socioeconomically ranked group than in the higher ranked ones, significantly greater in the Israeli Arab population compared to the Israeli Jewish population, and higher in the Northern and Southern Districts than the overall *Maccabi* membership. Lack of CHI was correlated to disparities in most health indicators. It can be presumed that purchasing CHI is a **marker** for a variety of population features correlated with achieving better health outcomes, but this was not examined in the present report. Thus, for example, undergoing a mammography is 2.2 times more prevalent among women with complementary insurance than without, even though this is a relatively simple test for the patient, which should be done every two years, and is offered free to all women in the target population.

Table 5. **Rate Ratios for Arab Versus Jewish Populations* –** Clinical performance measures, by gender and socioeconomic ranking, adjusted for age

	Total Population		SES 1-8	
	Men	Women	Men	Women
Diabetes prevalence	1.52	1.79	1.20	1.27
CVD prevalence	1.16	1.37	1.47	1.11
Diabetes				
Follow-up examinations	0.90	0.93	0.80	0.83
Good diabetes control – glycosylated hemoglobin < 7	0.74	0.75	0.81	0.78
Poor diabetes control – glycosylated hemoglobin >9	1.79	2.22	1.37	1.49
LDL < 100	0.85	1.02	0.87	0.73
Prevention and early detection				
LDL examination in healthy members	0.94	0.98	0.98	1.00
BMI recording	1.01	1.06	0.99	0.99
BMI > 25	1.14	1.54	1.08	1.19
Colorectal cancer screening	0.64	0.78	0.83	0.94
Mammography screening		0.88		0.93

* Since over 90% of Arab *Maccabi* members belong to the lowest socioeconomic cluster, health indicators for this population are presented in comparison to the overall population of Arabs and non-Arabs as well as compared to both populations in the lowest socioeconomic clusters 1-8 (91.8% of the Arab population and 19.1% of the Jewish population are in these clusters).

Organizational Decision for Fostering Equality

***Ongoing Action for Assessing Equality*:** *Maccabi* has decided to embed in the organizational workflow an ongoing assessment of the equality dimension from a few perspectives: 1) Continued investment in developing a concept and methodology for assessing equality in healthcare services, with attention to the following dimensions: inputs, needs, service utilization and health outcomes, and correlation analysis of

these dimensions; 2) Expansion of the investigation of populations detected in the first report as being susceptible to inequality and investigation of other populations known in the literature as subject to healthcare inequality, such as women, children, or people with disabilities; 3) Evaluating the economic implications of the decision to engage in promoting equality in health, given that this decision has not yet been backed by government resource allocations; 4) Improving the data infrastructure for detecting populations vulnerable to inequalities that would allow for more accurately identifying vulnerable populations on the individual level, using data on education, length of residency, or religious practice. It would be advantageous to promote a national action that would permit transferring data about ethnicity to the sick funds.

***Cultural Competency in Intervention Centers*:** A central component of promoting equality is the cultural competency of healthcare services. *Maccabi* has resolved to provide healthcare services that are adapted to the different social, ethnic, and cultural characteristics of its members. This decision was based, among others, on local success stories that enhanced the understanding that people in the field could considerably help narrow gaps thanks to their familiarity with local obstacles and ways to overcome them. Learning from the field was very helpful in designing the strategy. For example, much was learned from a local success story in 2004-2005, when the rates of mammography testing for early detection of breast cancer were raised among Israeli Arab women members of the sick fund branches of the Arab Triangle (Tira, Taybeh, and Kalansawah) (see the following "*Spotlight*").

In line with the resolution to strengthen cultural competency, the following steps were decided upon:

- Adequate representation in healthcare personnel and administrators will be sought from within ethnic-cultural populations, such as the Israeli Arab population or immigrants from Ethiopia, in order to increase the organizational awareness of the unique needs and features of these groups and thus refine the design of services for them.

Locating and recruiting healthcare personnel from these populations are already taking place;

- Healthcare professionals, administrators, and employees will receive cultural competency training. *Maccabi* has already undergone a successful process in collaboration with Ben-Gurion University, during 2008, of training caregivers and employees to provide services with cultural competency for the Bedouin population in the Negev. A decision was made that by the end of 2012, **all** of *Maccabi*'s employees will have been trained for cultural competency;
- Existing activities of improving the linguistic and cultural accessibility of *Maccabi*'s educational materials and informational messages to its members will be expanded. (A telephone medical interpreting center has been in place since November 2009 as a pilot program including several Northern District branches. This center was designed to improve communications between patients and caregivers who speak different languages.) Cultural intermediaries are already being used in various areas to produce a supportive infrastructure for caregivers, patients, and employees, and the intention is to expand this activity. Also, resources will be invested in developing care-giving and administrative leadership, representing the populations at risk for inequality. The idea is to promote the representation of the population's needs and the impact of its representatives on the organizational discourse. More operations will be initiated for encouraging health-promoting behaviors within populations vulnerable to inequality.

Spotlight: Increasing the Rate of Mammography for Early Detection of Breast Cancer among Israeli Arab Women in *Maccabi* Health Services

Increasing the rate of mammography for early detection of breast cancer among Israeli Arab women is an example of a *Maccabi* success story. Mammography rates among Israeli Arab women in *Maccabi* (2004) were very low compared to those of Jewish women. A local team in the Arab Triangle branches (*Tira*, *Taybeh* and *Kalansawah*) studied the phenomenon of low demand for the test, which is provided at no charge. Among the reasons found were lack of mastery of Hebrew, the language of the order to perform the test; difficulty mailing the notice because women in the same locality often bear the same names; physical distance (the mammography system is located about 30 km from the Triangle, with no convenient transportation lines); difficulty leaving the locality with an accompanying family member when men are at work; lack of self-care tradition in this age group; prejudice and religious/social stigma related to testing; and, women's reluctance to be examined by a male physician.

The people in the field formed a "solution package" adapted to the detected barriers. Among others, a local nurse approached the local religious leaders and enlisted their support for the test so as to reduce labeling and prejudice; the women were recruited by a nurse who went door-to-door inviting them to a meeting at which she explained the importance of the test; the women were tested by a physician in the presence of the nurse, and if the woman still objected the team skipped the physician examination; the branch staff set the time at the mammography system for a few women at a time, so that one chaperon could accompany a number of women, thus reducing the loss of work days among the men. Within 15 months, the rate of testing in all three branches rose significantly. Thus, for example, in the *Kalansawa* branch, the rate rose from 35 to 60 percent. The lessons were applied to all other branches serving the Israeli Arab population, and helped to increase significantly the rate of testing in those branches between 2004 and 2005 – a relative improvement of 73 percent (from 27 to 46 percent testing), compared with a 29 percent improvement among all female *Maccabi* members for the same period.

***Preferential Allocation of Resources to the Social Periphery*:** *Maccabi* has adopted a policy of preference for the populations that were found to belong to the social periphery and vulnerable to inequality, especially Israeli Arabs, new immigrants, and populations in poverty. Preference for them is reflected in resources and organizational attention. All *Maccabi*'s organizational units were instructed to include in their annual work plans equality-enhancing programs. For 2010, NIS 10 million were allocated as a dedicated amount for initiating new and comprehensive initiatives and programs to promote social equality in the social periphery of each of the districts.

***Improving Accessibility to Quality Services for the Geographic Periphery*:** As of 2009, tele-health is expanding into new areas, such as connecting remote clinics by real-time video communication centers of expertise, to enable consultation by the primary care physician and the patient – located in a remote locality – with a specialist in another community. Likewise, advanced equipment is being made portable to shorten the distances between the center of the country and the periphery. In addition, an incentive is being offered to senior physicians to open expert clinics in remote places to improve the quality of care in the periphery.

***Reducing Economic Barriers to Achieving Optimal Health Outcomes*:** *Maccabi* is in the process of studying, in collaboration with the Ministry of Health, ways to reduce co-payment for medications for chronically ill patients receiving income support and for populations with special needs, such as persons with disabilities. *Maccabi* is making efforts to encourage eligible populations to make full utilization of their rights through: dissemination of information about member rights in different languages and media; invitations to patients to see social workers who can help them use their benefits; introduction of an automatic treatment approval process of approving and tagging chronic disease to provide rights and eligibilities to chronically ill patients.

Spotlight: Intervention Program for Child Immunization Among the Negev Bedouins*

The Negev Bedouins have the lowest socioeconomic ranking in Israel, similar to that of Third World populations. About half of them reside outside of permanent settlements in unrecognized villages. Procreation is important in their culture and their fertility rate is exceptionally high. In addition, marriages between first-degree relatives are frequent (40 percent) and polygamy is common. These characteristics have great influence on the health of the population.

In the winter of 1990-91 a measles epidemic erupted in Israel, with a morbidity rate of 415.6 per 100,000 and a hospitalization rate of 50.9 percent among the Bedouin. The same year seven Bedouin children died as a direct result of complications of the disease. At that time about 40 percent of the Bedouins had no medical insurance and they received medical treatment on the basis of payment for services in local clinics, from private physicians and in a university medical center serving the region. Only 76 percent of Bedouin children were seen at Mother and Child Health (MCH) Clinics (a.k.a. *Tipat Halav* or "drop of milk") at least once, and only 53 percent of children born in 1988, who were two years old in 1990 when the epidemic erupted, were immunized against measles (Ministry of Health figures).

Consequently a national committee was set up which recommended an intervention plan. Most of the committee's recommendations were included in the implementation of the plan. An Israeli Arab interviewer personally discussed with each Bedouin mother, while she was hospitalized after the birth of her infant, the importance of early registration of the newborn at a MCH clinic. Two mobile vaccination teams were established as well as a computerized database to track children's immunization. This system facilitated home visits by the mobile units to immunize Bedouin children who had not been immunized on time. At the same time, a community education program was introduced to raise the awareness of the Bedouin population of the importance of receiving immunizations on time. In addition, seven MCH clinics were established since 1997 in unrecognized villages as well as one

* This *Spotlight* is based on an extensive article by Belmaker et al., in *The Lancet*.

mobile clinic. The Ministry of Health's Department of Nursing has developed a special program to train Bedouin women as registered nurses, in collaboration with Schools of Nursing in the region (Barzilai Medical Center and subsequently with the Recanati School of Nursing of Ben-Gurion University).

Two recommendations of the committee were not implemented: no funding was provided for hiring additional doctors and nurses to provide the preventive services at the MCH clinics, and incentives were not approved to encourage public health nurses to work with the Bedouin population. (Incentive pay for nurses was approved and funded only in 2010.)

Implementation of the intervention plan led to an increase in immunization coverage against measles from 53 percent among two-year-olds born in 1988 to 90 percent among two-year-olds born in 2001. At the same time, an impressive drop was registered in infectious diseases that are preventable through immunization, except for whooping cough (pertussis). Between 1990 and 2003 there were no reports of morbidity from diphtheria, tetanus, congenital rubella and polio among Bedouin children under five. Since the 1990-1991 measles epidemic only 13 cases of measles among Negev Bedouin children have been reported. After the introduction of immunizations against *Haemophilus influenzae* b in 1994, and against viral hepatitis A in 1999, only isolated cases of these diseases have been diagnosed among Negev Bedouin children under five years of age.

Appendix: Price Indices

The system uses three price indices as follows:

Health Services Price Index of the Central Bureau of Statistics (CBS) refers to private spending and consists mainly of the prices of medical services, dentistry and the prices of medications (see the chapter "Israel's Education System: A Domestic Perspective", in this report). The index is published in the chapter "Prices" of the CBS statistical annuals for the years 1995-2007 (CBS, Israel Statistic Annual various years).

The **Health Cost Index** is used to update the basket; its composition is as follows:

Component	Until 2004	from Jan. 2005
	Weight (percent)	
Consumer price index	23.00	40.00
Wholesale price index for medicines	17.00	-
Building input index	2.00	2.00
Wage index for the public sector	22.04	22.04
Wage index for the health sector	35.96	35.69
Total	100.00	100.00

Source: Bin Nun and Kaidar (2007).

The **Health Input Index** consists of the price of one hospitalization day (50 percent), the healthcare sector wage index (30 percent) and the consumer price index (20 percent). This index refers primarily to the sick funds' basket of services. In fact, the indices are very close, and the second is included in the third with the hospitalization component in the latter. Hence, the two indices are also linked in their development over time.

In this paper the CBS index is used to adjust private expenditures, whereas the inputs index is used to adjust public expenditure. Accordingly, the **combined index** is used to adjust the national expenditure and it does so using both indices, according to their relative share of the expenditure. The three indices, in addition to the combined index, are shown in Appendix Figure 1. Appendix Figure 2, shows the

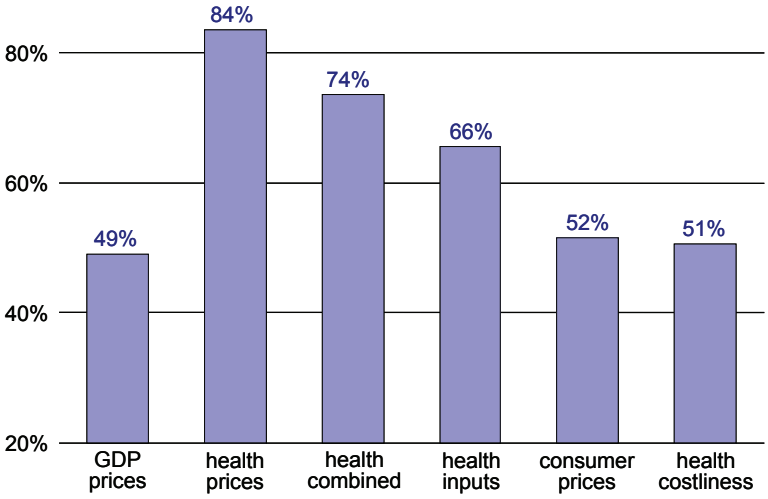
harsher damage caused by inflation to privately funded healthcare compared to publicly funded healthcare.

This reality underscores one of the fundamental reasons for the State's involvement in funding the healthcare system and in the satisfaction of most of the demand within it. The State offsets the monoposonistic power of service providers to dictate prices. Therefore, over time, one dollar buys more through public spending than through private spending.

Appendix Figure 1

Change in Various Price Indices

1995 compared to 2007

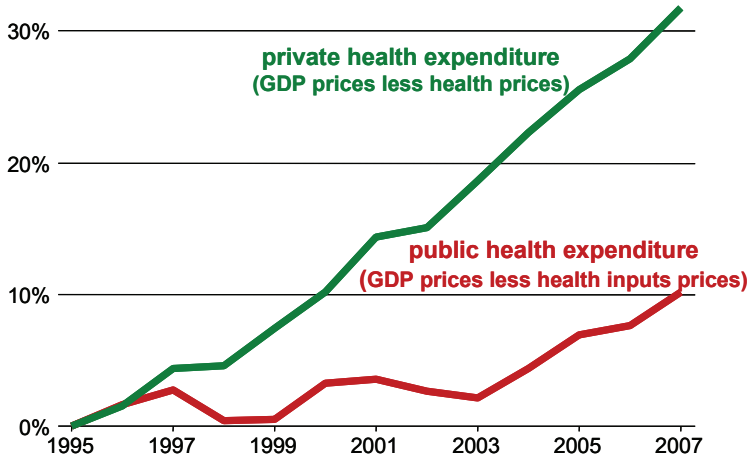


Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, Ministry of Health.

Appendix Figure 2

Impact of Different Price Indices

in calculating health expenditures*, 1995-2007 (percent)



* Per standard person.

Source: Taub Center for Social Policy Studies in Israel.
Data: CBS, Ministry of Health.

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