



Myers-JDC-Brookdale Institute Smokler Center for Health Policy Research Jerusalem Jewish Healthcare Foundation Pittsburgh

THE MEDICAL WORKFORCE AND GOVERNMENT-SUPPORTED MEDICAL EDUCATION IN ISRAEL



Rachel Nissanholtz and Bruce Rosen Myers-JDC-Brookdale Institute

Prepared at the Request of the Jewish Healthcare Foundation

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This report is part of an intensive, multi-staged collaboration between the Myers-JDC-Brookdale Institute in Jerusalem and the Pittsburgh-based Jewish Healthcare Foundation. The goal is to enable policymakers in the United States to draw lessons from the Israeli healthcare system and vice versa.

In the first stage of the project, two documents that provide useful background to the current report were produced:

- Healthcare in the US and Israel: Comparative Overview
- Healthcare in Israel for US Audiences

The former may be purchased from the JHF or the MJB and both documents can be downloaded from the JHF and MJB websites.

The current phase of the project includes four monographs:

- The Role of the Government in Israel in Containing Costs and Promoting Better Services and Outcomes of Care
- Primary Care in Israel: Accomplishments and Challenges
- How Health Plans in Israel Manage the Care Provided by their Physicians
- * The Medical Workforce and Government-Supported Medical Education in Israel

The first section of the current report focuses on medical education, while the second addresses medical workforce issues.

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FOREWORD

This monograph is part of a series commissioned by the Jewish Healthcare Foundation to impart information about the Israeli system that may be useful to US health policymakers in their efforts to guide the development of the US healthcare system in ways that insure both the quality of care and the overall financial viability of the system. The US faces a looming shortage of primary care physicians: a recent study published in the *Journal of the American Medical Association*¹ finds that fewer than 2% of current medical students are interested in internal medicine and 4.9% in family practice. Reasons range from the increasing costs of medical education (the average medical student graduates with \$200,000 in loans), to increasing disparities in primary care vs. specialist salaries, to the difficulties of managing a growing and increasingly complicated patient population as baby boomers move into old age.

In an attempt to slightly ameliorate some of the financial barriers to primary care, the recent US health reform legislation mandates a 10% bonus in Medicare reimbursements to primary care physicians. However, the legislation will also add 32 million enrollees to the system in 2014, half through the Medicaid program (Sommers and Epstein, 2010).² Coming at a time when the supply of primary care physicians is declining, this influx is likely to place additional strain on primary care physicians – forcing policymakers and educators in the US to think creatively about how best to deliver cost-effective and high-quality primary care.

Israel too, as this monograph confirms, will shortly be facing restrictions in the supply of physicians. These shortages may prompt a reexamination of Israeli reluctance to train advanced practice nurses and other physician extenders, which are common in the US. On the other hand, the US has much to learn from Israel. At less than \$20,000 in total for 6 years of Israeli medical school – accounting for just 10%–13% of actual costs – medical education is both affordable and high quality. Further, the prevalence of salaried positions and the extensive support afforded by advanced primary care electronic health records make a closer look at the primary care physician workforce in Israel, as described in this monograph, worth the investment.

Karen Wolk Feinstein, PhD President and CEO Jewish Healthcare Foundation

¹ Hauer, K. et al. 2008. "Factors Associated with Medical Students' Career Choices regarding Internal Medicine." *JAMA* 300(10):1154–1164.

² Sommers, B.D. and Epstein, A.M. 2010. "Medicaid Expansion – The Soft Underbelly of Health Care Reform?" *New England Journal of Medicine* 363:2085–2087, November 25, 2010.

1. MEDICAL EDUCATION, LICENSURE AND SPECIALTY CERTIFICATION

We begin this chapter with an overview of Israeli medical schools, with special attention to how they are financed. We will then move on to a brief overview of the licensure process, post-graduate (i.e., residency and fellowship) training and continuing medical education.

1.1 Medical Schools

Israel currently has four medical schools, all of which are affiliated with major research universities. Together, they granted MD degrees to approximately 400 students in 2009. There are plans to expand the existing medical schools so that together they will grant approximately 600 MD degrees a year in the near future. In addition, the government recently authorized the opening of a fifth medical school, which is expected to begin operation in October 2011.

Interest in pursuing medical studies has always been high in Israel and continues to be so. In 2009, some 1,600 students applied to medical schools and approximately 400 were accepted. In that same year, a few hundred Israelis began medical studies in other countries, most commonly Hungary, Italy, Romania and the former Soviet Union (FSU).

In Israel, it typically takes six years of studies in a medical school and a year of rotating internship to receive an MD degree.¹ The first three years focus on basic sciences, while the next three have a clinical focus.

Enrollment in medical school does not require a prior baccalaureate degree; instead, students earn a BA in medical sciences at the end of the third year in medical school. This does not mean that students typically enter medical school immediately after high school at the age of 18. Instead, after completing high school, the vast majority of them² first serve in the Israel Defense Forces (IDF) for a period of at least three years for men or two years for women. Some also take a year or more off for travel or work, right after army service. As a result, the average age of entry into medical school is 23 and the average age of completion of the medical degree is 30.

Medical school tuition is NIS 10,000 (approximately \$2,500) for each of the three pre-clinical years and NIS 13,000 (approximately \$3,250) for each of the three clinical years.³ Tuition accounts for only 10%–13% of the full cost of medical education, which is estimated to be about NIS 100,000 (\$25,000) per year. The main sources of funding of medical education are government grants to

¹ Some of the medical schools also have special tracks for students who start their medical school studies after having already completed a BA in a related field, such as biology or chemistry. In those tracks, medical studies take 4 years instead of the usual 6.

² At the same time, a small percentage of the medical school classes (generally 10%–15%) are composed of 18 year olds who are part of the IDF medical corps training cadre (*atuda*). The IDF funds their medical education and allows them to pursue medical studies at a relatively young age, as part of their commitment to serve in the IDF. In return, these soldiers commit to continuing to work for the Medical Corps for 5 years after completing their medical degrees.

³ In contrast, in the US the average tuition in 2007 at public medical schools was \$20,983 for in-state students and \$39,428 for out-of-state students. Average tuition at private medical schools was \$37,800 (U.S. News and World Report, accessed 2010)

the universities (approximately 40%–45%) and other sources of medical school revenue (which also account for approximately 40%–45%). These "other sources" include donations, income from investments, sales of services, overhead on research grants and earmarked government grants for special projects. Unfortunately, we do not have access to data on the size of these specific components.

The funding model for medical education in Israel is similar to the country's general model for funding university education, which also relies very heavily on government funding.⁴ BA students typically pay tuition fees of NIS 10,000 per year and tuition (from students at all levels) accounts for 20% of the universities' revenues. The remainder comes from the government's Council for Higher Education (50%), contributions (7%) and "other sources" (23%).

Note that tuition for the first three years of medical school is identical to tuition for BA students in general and that tuition for the subsequent three years is "only" NIS 3,000 higher. This, despite the fact that the full cost of a year of medical education is higher than that of the average degree program (Gat, 2010). Thus, not only is medical education subsidized heavily, it is also subsidized to a greater extent than other degree programs.

In interpreting these figures, and particularly the much lower cost of medical education in Israel compared to the US, it is important to keep the following in mind:

- The average annual salary of Israeli physicians is about \$60,000 75,000, which is about three times the average salary in Israel. This contrasts sharply with the US average of \$175,000, which is about four times the average salary in the US. Thus, Israeli physicians have much less capacity than their US counterparts do to pay back student loans.
- 2. Students typically arrive at medical school (and university more generally) after completing at least 2-3 years of army service. This period of their lives is devoted to meeting national needs (often at significant physical risk), for which they are usually paid less than \$100/month. Part of the implicit social contract between the country and its young people is that, in exchange for this service, the state will cover most of the costs of their higher education.

Not only is the cost to the student lower in Israel than in the US, but so too is the full cost of a year of medical education (which includes financing from government and philanthropic sources, in addition to tuition revenues from students). There are several factors that account for this, including:

 Lower levels of remuneration for Israeli medical school faculty, in keeping with the nation's lower level of remuneration for physicians, university faculty and professionals throughout the economy

⁴ In contrast, in the US a smaller proportion of higher education in general, and of medical education in particular, is funded by the government.

- A lower faculty/student ratio: In Israeli medical schools, the ratio of students to faculty members stands at 6:1 (Margalit, 2010), in comparison with 0.6:1 in the U.S (Barzansky and Etzel, 2003).
- More rudimentary facilities such as laboratories, classrooms, offices and teaching sites in Israel.

1.2 Registration and Licensure

Upon completion of medical school coursework, all students must pass a standardized national exam (administered by the medical schools) and submit a scientific thesis in order to receive their diplomas. They are then required to complete a one-year internship before being given a medical license by the Ministry of Health. Aside from a smaller number of outstanding students who are allowed to choose where to do their internships, a lottery system (taking into account marital status and current area of residence) is used for these placements.

Foreign graduates must pass a special internship/licensure exam administered by the Ministry of Health and by the Scientific Council of the Israel Medical Association (IMA) in order to secure a license, unless they have at least 14 years of work experience abroad. In the latter case, in lieu of a licensure exam, they can work in a supervised setting for a period of six months after which, if the department head writes a letter of endorsement, a license will be granted.

Israel does not have mandatory re-licensure or re-registration. A medical license, once granted, is for life. While licenses can be revoked in extreme circumstances (such as physical or mental incapacitation or a felony conviction), revocations are rare events.

1.3 Graduate Medical Education

Most (approximately 95%) of Israeli medical school graduates go on to pursue residency training. Board certification is handled by the IMA's Scientific Council and the various specialty societies. There are currently 56 different recognized specialties in Israel. Residencies can only take place in frameworks that have been recognized as appropriate training sites by the Scientific Council.

Most residency programs take between 4 and 6 years for completion and are similar in their structure to residency programs in the US. Typically, residents take their specialty exams in two stages, with the first stage taking place midway through the residency (usually after 2–3 years) and the second taking place after completion of the residency. Most residency slots are funded by the hospitals out of their regular operating revenues.⁵ There is sometimes special government funding for a certain number of slots, such as in the effort to encourage employment of immigrant physicians in the early/mid-1990s. The health plans, to varying extents, fund the salaries of residents in family medicine.

Recently, there has been growing interest in moving a greater proportion of residency training from hospital settings to community settings. This is because a growing proportion of medical

⁵ In contrast, the medical schools make payments to the hospitals for the training that they provide to medical students.

care is taking place in the community, and it is important to prepare young physicians for this changing reality. There has been some movement in this direction, but significant barriers to change remain (Nirel et al., 2007).

Subsequent to residency training, most residents pursue sub-specialty training as fellows. Some of them do so in Israel, but most do so abroad, primarily in the US.

1.4 Continuing Medical Education

A wide range of CME courses are offered by the universities and the various medical societies. Physicians are not required to undertake CME. Still, each year approximately 80% of physicians take at least one CME course. This is facilitated by the collective bargaining agreements that typically allow community-based physicians to engage in 20 days of CME per year; the topics for six of the days are chosen by the employer and the topics for the other 14 are left to the physicians themselves. In the hospital setting, each physician has the right to 130 days of CME over the course of his working life. The coursework tuition, in both hospital and community settings, is financed by the employers.

1.5 Expert Reflections on Differences between the Two Countries

We asked several deans of Israeli medical schools to share with us their perceptions of how medical training in Israel differs from that in the US. The features of Israeli medical training that they cited included:

- Greater emphasis on clinical education (at the patient's bedside) during medical school
- Earlier exposure to more complicated cases and broader responsibilities earlier in the training (due to lower hospital staffing levels and lesser availability of subspecialty consultations) both during medical school and during internship/residency
- Longer training programs for some residencies
- Lower faculty-student ratios
- The paucity of strictly clinical (as opposed to research or mixed) tracks in academic appointments.



2. THE MEDICAL WORKFORCE

We begin this chapter with a statistical overview of the medical workforce and then analyze the publicly available data on the salaries of Israeli physicians and physician work satisfaction. This is followed by a discussion of how Israel is emerging from a period of a physician surplus and beginning to address a projected physician shortage. Finally, we provide an overview of the employment settings of Israeli physicians (including private employment).

2.1 Statistical Overview of the Physician Workforce - 2008

As of 2008, Israel had approximately 25,500 licensed physicians up to age 65, resulting in a ratio of 3.5 per thousand population.⁶ Approximately 40% of these physicians are women, 56% of them were born outside of Israel and 62% of them received their medical training outside of Israel (Haklai, 2009).

As of 2008, Israel had one of the highest physician-to-population ratios in the world; it was approximately 20% higher than the OECD average. However, while the ratio has declined somewhat in Israel in recent years, it has continued to increase in most OECD countries.

There is substantial variation in the physician-to-population ratio across regions; it ranges from 1.7 per thousand in the north of the country to 4.2 per 1000 in Jerusalem.

Approximately 13,000 physicians up to age 65 have specialty certification, constituting about half of the physicians up to age 65. The specialties with the largest share of the specialists are internal medicine (18%), pediatrics (15%), family medicine (9%), gynecology (8%) and psychiatry (7%). Approximately a third of the specialists are new immigrants and, coincidentally, women also constitute a third of all specialists.

2.2 Physician Salaries

In Israel, no systematic surveys of physicians' incomes have been carried out. The most widely used sources of information on physician incomes are the two largest employers of physicians – the Ministry of Health (MOH) and Clalit Health Services (which together employ a little over half of the nation's physicians), and the Israel Medical Association's reanalysis of data from those sources. These data are limited in that they do not cover all of the country's physicians and do not include income that Clalit or MOH physicians earn from additional employment.

The most recent publicly available data are for 2005–2006 and come from reports submitted by the employers and the IMA to the arbitrators for the most recent collective bargaining contract. According to the MOH's submission, the average monthly salary of physicians in its employ (predominantly hospital physicians) was NIS 21,000 per month (approximately \$56,000 per year). Clalit reported that the average monthly wage for its physicians in 2006 was NIS 24,800 for those employed in the community and NIS 22,700 for those employed in its hospitals.

The IMA disputed these figures, and argued that the correct figure for MOH physicians was NIS 18,200 per month in 2004/5 (approximately \$49,000 per year), with a breakdown as shown in Table 1. The difference in the two estimates appears to stem from the year for which the data

⁶ As reliable data on the number of employed physicians in Israel are not available, the number of licensed physicians up to age 65 is often used as a proxy measure. Of course, some physicians below that age are not employed at all, or are not employed as physicians, while others continue to work in the profession beyond the age of 65. The use of this proxy measure will be even more problematic in the future, as Israel is going through a process of raising the retirement age. It is also worth noting that if one considers all licensed physicians irrespective of age, their number reaches slightly more than 33,000 for a ratio of 4.5 per thousand population.

are presented as well as whether travel allowances and certain other allowances were included in the calculations.

In interpreting any of these figures, particularly in comparison with data on US physician incomes,⁷ the following should be kept in mind:

- The data are for salaried physicians working in facilities operated by their employers, and as such, these physicians do not face the substantial practice expenses faced by many of their US counterparts.
- While in both the US and Israel⁸ the average physician works approximately 50 hours per week (taking into account all employment settings), the Israeli salary data reflect fewer hours of work per week than the US income data. This is because the Israeli salary data refer to the work done for a specific major employer, and many Israeli physicians work at more than one job, while the US income data take into account all sources of income.
- Note that in Israeli public sector, the official average workweek for a full-time salaried position is 42–45 hours in the hospital and 35–45 in the community, depending on age and seniority both lower than the 50-hour average, taking into account multiple employers.⁹
- The tax rate in Israel is much higher than in the US, thus comparison of gross (pre-tax) income understates the difference in net income between US and Israeli physicians.
- On the other hand, fringe/pension payments made by employers add an additional 30% above wages to the employers' costs, with no comparable figure available for the US. Moreover, in Israel the cost of medical malpractice insurance is covered by the employer, while in the US,¹⁰ this is often covered directly by the individual physician.
- In the wake of a 2008 decision by an external arbitrator, physician salaries in Israel are due to increase by approximately 25% in a series of steps starting January 2008 and ending January 2011.
- The dollar-shekel exchange rate has dropped dramatically, from 4.6 in 2006 to 3.6 as of this writing (November 2010).

⁷ According to the US Medical Economics earnings survey, in 2006 the average US physician earned \$175,000. This was about four times the income of the average US worker.

⁸ The Israeli data are based on tabulations prepared for this paper from the 2008 Labor Force Survey; the US data are from Staiger et al., 2010.

⁹ The proportion of physicians who have income from the provision of medical care outside their many jobs varies substantially by specialty. For example, almost all pediatric surgeons engage in additional work, and most dermatologists do so, whereas almost no emergency physicians and family physicians do so.

¹⁰ In the US, malpractice insurance rates vary tremendously by state and specialty. Insurance premiums for some physicians in high-cost states can reach \$200,000 per year, while premiums in low-cost states are closer to \$20,000 annually (Furchtgott-Roth, 2009). An even greater source of variation is specialty, with neurosurgeons and obstetricians paying particularly high rates.

	Average monthly gross salary in NIS	Percent of MDs	Average age
No specialty certification	13,266	40%	38
Young specialist, excluding managers	16,295	13%	42
Experienced specialist, excluding managers	18,728	22%	50
Specialist in managerial role	25,458	22%	54
Specialist in senior managerial role	35,156	3%	60
Total	18,200	100%	

Table 1: IMA Data on 2005 Gross (Pre-Tax) Salaries of Physicians Working for the MOH

2.3 Physician Work Satisfaction

This section is based on a thorough review of the literature, along with our own impressions based on many years of observing Israeli physicians and working with them.¹¹

Key Points Emerging from the Published Literature

The published literature is limited in that it includes no national surveys of physicians subsequent to 2003. In addition, due to differences in the way questions were formulated in the various studies, we were limited in our ability to compare satisfaction levels between primary care physicians and specialists, between US and Israeli physicians and across time periods. Still, a number of important findings emerge, and we highlight them here. The full literature review is available as a separate document, upon request.

Specialists

The most recent national survey of specialists was carried out in 2001 (Nirel et al., 2003) and included physicians from five specialties that were chosen because they involve work in both hospital and community settings (gynecology, general surgery, cardiology, ENT and dermatology). Seventy-one percent of respondents rated their level of satisfaction with their place of work in the top 3 levels on a 7-point scale; 27% of them were satisfied "to a very great extent" (the top level). The aspects of the work with the highest percentage of physicians satisfied "to a very great extent" (top level) were: "the extent of responsibilities" (55%), "the opportunities to use your skills (39%) and "the variety in the job" (38%). The areas with the lowest percentage of physicians satisfied "to a very great extent" were "your salary level" (9%) and "work hours" (15%).

All but 2% of the respondents listed the government or a health plan as their primary employer, with 55% working as salaried employees in hospitals, 27% as salaried employees in community settings and 16% in the community as independent contractors to the health plans. 42% of the

¹¹ Bruce Rosen's doctoral dissertation (1990) focused on physician payment systems, and the place of physicians in Israeli healthcare has been a part of his research agenda ever since. Rachel Nissanholtz recently completed a doctoral dissertation that focused on the relationships between physicians and pharmaceutical companies. Prior to that, she was the director of public policy for the Israel Medical Association.

respondents worked in three or more frameworks and they tended to be less satisfied than the 17% working in a single framework and the 41% working in two frameworks (typically a hospital and a health plan). Physicians working primarily as independents tended to be more satisfied than those working primarily on a salaried basis.

Primary Care Physicians (PCPs)

The most recent major survey of primary care physicians (Gross et al., 2005) was carried out in 2002–2003, among physicians working for either Clalit or Maccabi (which together account for approximately 80% of Israeli PCPs). The study used a 5-point scale to measure satisfaction (limiting the ability to compare the findings with those for specialists, where a 7-point scale was used). Seventy-two percent of the PCP respondents indicated that overall they were satisfied with their place of work to a great extent or to a very great extent; 15% indicated that they were satisfied to a very great extent. The aspects of the work with which the highest percentage of physicians were satisfied to a very great extent were "the extent of responsibilities" (29%), and "the people working with you" (27%). The areas with the lowest percentage of physicians satisfied to a very great extent were "work hours" (9%) and "your salary level" (5%).

Earlier studies (Kitai, 1999; Tabenkin, 1999; Gross et al., 1999) identified various sources of PCP satisfaction, including the clinical work itself, opportunities to consult with colleagues, participation in continuing education, and involvement in the training of residents and medical students. Sources of low satisfaction included work overload, insufficient resources, and administrative tasks.

Israel will soon have new data on work satisfaction of primary care physicians as the Myers-JDC-Brookdale Institute has just launched a new nationally representative survey of PCPs who treat adults¹² within the context of a broader study of the use and impact of quality indicators in the health plans.

Our Own Impressions

There are various indications that medicine has been, and continues to be, a satisfying and attractive profession in Israel, overall. Many of the country's brightest young people continue to compete vigorously for the right to study in Israeli medical schools, and many of those who are not accepted pursue medical studies abroad and then return to Israel. The percentage of physicians leaving the profession remains low.

Enduring Factors and Transient Factors

At the same time, there are certain elements of the work that apparently serve to reduce overall satisfaction, without leading all the way to deep dissatisfaction. These apparently include both enduring factors and those of a temporary nature. We will discuss the two groups of factors separately and in turn.

¹² Pediatricians are not included in the survey because almost all the existing quality indicators relate to adults only.

For many decades, there has been a sense among both hospital and community physicians that they deserve to be paid more in light of their many years of education/training and their level of responsibility (thus reflecting both the level of their investment in human capital and their perceived contribution to society). An enduring complaint among primary care physicians is that they are expected (by their employers and by their own professional consciences) to do too many things relative to the time available (the proverbial 7 minutes per patient).

Other points of dissatisfaction, while transient, can be particularly painful; they often result from changes in working conditions or the environment:

- When computers and electronic health records were introduced into the clinics, many felt that they were taking time and attention away from patients. Over time, these frustrations seem to be abating due to a combination of greater familiarity and comfort with the computers, the development of coping strategies, and generational changes.
- The introduction of quality monitoring over the past decade has led to dissatisfaction with reduced clinical autonomy; the depth and duration of this feeling remain to be seen.
- The massive immigration from the FSU in the early 90s created a major physician surplus, and generated substantial dissatisfaction among those immigrant physicians unable to find employment at levels they felt to be commensurate with their skill level and experience.
- The conclusion of that wave of immigration has led to major declines in the physician/population ratio. Peripheral regions have been hit hardest, leading to increased workloads there, and apparently declines in satisfaction levels as well.
- The prevalence of commercial and supplemental insurance has grown substantially over the past decade, leading to increased opportunities for "private" or "semi-private" practice – but only for certain specialties. This has probably led to enhanced satisfaction among dermatologists, cardiac surgeons and the like, but greater dissatisfaction among pediatricians, primary care physicians, anesthesiologists, etc. for whom private practice opportunities are very limited.
- It is likely that the hi-tech boom of the early 1990s temporarily increased the extent to which Israeli physicians were dissatisfied with their incomes, as some of them compared their incomes with those of colleagues in the hi-tech sector. That boom increased the salaries of Israeli engineers as a group and created windfalls for a small but highly visible set of entrepreneurs. The feelings of relative deprivation dissipated somewhat when the hi-tech bubble burst in the late 1990s, with many of those involved in hi-tech losing their jobs or even a sizable portion of their accumulated wealth.
- Two studies (Kushnir et al., 2004 and Gross et al., 1999) found that PCP satisfaction declined markedly during the latter half of the 1990s and the beginning of the new millennium. The period was characterized by important new legislation (the National Health Insurance law and the Patient Rights Law) as well as intense financial pressure felt by the health plans. The authors suggest that these factors may have played a role but draw no definitive causal conclusions. Moreover, as noted above, we do not have comparable recent data that

would allow us to assess whether PCP satisfaction levels have returned to the levels of the early 1990s.

One of us (Rachel) senses that Israeli physicians as a group are less satisfied today than they were in the past. She feels that this is related in part to a decline in the status of the medical profession in the eyes of the public and less respectful behavior on the part of the patients.

Differences between PCPs and Specialists

A related issue is whether primary care physicians are less satisfied than specialists, and whether this is changing over time. On the one hand, unlike the situation in the US, salaries are comparable for the two groups in Israel. On the other hand, even in Israel private and semiprivate practice opportunities are greater for certain types of specialists.

The situation also appears to be complex with regard to relative prestige levels. Hospital-based practice tends to carry with it greater access to students, research, academic appointments, etc. However, the growth in the proportion of PCPs who are board-certified in family practice is probably contributing to both PCP self-esteem and patient respect.

The main conclusion from the hard data available is that the proportion of new medical school graduates choosing family medicine residencies has remained stable – at around 10%;¹³ this does not include physicians pursuing a primary care career through pediatrics, gynecology or internal medicine. At the more anecdotal/impressionistic level, we are seeing signs of growing frustration – both absolute and relative – on the part of the more experienced PCPs with whom we tend to be in contact. In part, this may be because **to date** efforts to monitor quality and control costs have focused primarily on PCPs. As this circle widens to include specialists in both community and hospital settings, PCPs will probably be less prone to feel that they have been singled out for particular scrutiny.

Israel and America

American readers may wonder whether Israeli physicians would require income and autonomy levels similar to those prevalent in US healthcare to be satisfied with their work. Our sense is that this is not necessary; Israeli physicians do want more income and autonomy, but the US does not serve as the principle reference point for most of them (recent immigrants from the US and recent returnees from US-based fellowships serving as possible exceptions here).

Israelis physicians are used to a situation where they work primarily as salaried employees of large organizations; many feel a great deal of loyalty to their employers and view their relationship with the employer as a very long-term relationship (Lachman and Noy, 1996; Lachman and Noy, 1997). They accept as both natural and legitimate that they will have limitations on how they practice medicine, even as they bristle at significant expansions of those limitations.

Israeli physicians are used to earning incomes comparable to other highly trained salaried professionals in Israel. During most periods, they aspire to moderate increases. It is only when they

¹³ Note that this number is a result of both supply and demand factors. It depends on both the number of residency slots offered by the health plans and the number of physicians interested in filling them.

perceive themselves as losing ground relative to other professions (e.g., during the hi-tech boom) that frustration levels and income expectations increase substantially. Even then, Israeli physicians do not even dare to dream of earning incomes comparable to those of US physicians.

2.4 The Transition from Perceived Surplus to Projected Shortage and the Move to Expand Medical Training in Israel¹⁴

For the past several decades, Israel has had one of the highest physician- to-population ratios in the world, and Israeli policymakers have grappled with the challenge of a physician surplus. To a great extent, that surplus was generated by the large numbers of immigrant physicians. Indeed, until recently, the Israeli physician supply relied heavily on physicians trained in other countries – primarily the FSU and Eastern Europe. However, that source is now drying up, generating concerns about a potential physician shortage.

For several decades subsequent to its establishment in 1948, Israel benefited from a substantial flow of immigrant physicians from the Soviet Union and Eastern Europe. There was major surge in the mid- 1970s, which made a crucial contribution to Israel's ability to provide access to primary care throughout the country, particularly in peripheral areas.

The influx of physicians from abroad was particularly intense in the years 1990-1994, when there was a massive wave of over half a million immigrants from the FSU, an extraordinarily high percentage of whom were physicians (over 2%, compared with 0.3% for the Israeli population prior to the immigration wave). During that period, Israel granted licenses to approximately 7,650 physicians of whom 1,250 (16%) were educated in Israeli medical schools, 5,450 (71%) in medical schools in the FSU, and 950 (12%) in medical schools in other countries.

The massive immigration of the early 1990s dramatically decreased the FSU's reservoir of potential Jewish immigrants to Israel. Since 2005, total immigration from the FSU has been less than 10,000 per year (compared to an annual average of over 100,000 for the 1990–1994 period and approximately 40,000 for the 1995–2004 period). The number of FSU-trained physicians receiving licenses peaked in 1992 at 2368; by 2000, it had dropped to 412.

All this led to a rapid decline in the total number of new physician licenses granted in Israel (from about 900 in 2000 to about 600 in 2005). The physician-to-population ratio also declined, albeit more gradually, from 3.7 per thousand in 2000 to 3.5 per thousand in 2005.

During this period, the number of physicians needed in Israel continued to grow, due to natural population increase, population aging and technological advances. In the late 1990s, a past chairperson of Israel's Council for Higher Education (CHE, which oversees Israel's system of universities and colleges) raised concerns about a future shortage of physicians (Rosen, 2008). However, it took several years, and several study commissions, before the problem seeped into the collective consciousness of health policymakers. After all, Israelis had always viewed their health system as being characterized by a physician surplus, not a shortage. Moreover, the projections of a shortage were based on a series of assumptions and pen-and-paper

¹⁴ This section draws heavily on excerpts from Rosen, 2008, and Rosen and Samuel, 2009.

calculations, while in the real world the physician-to-population ratio remained stable at levels significantly higher than the OECD average.

Over time, however, policymakers came to understand that Israel would face a major decline in the physician-to-population ratio (to substantially below 3.0 per thousand by 2020), unless corrective actions were taken. They were helped along in this realization by studies carried out independently by the CHE and the Ministry of Health (Rosen, 2008). Moreover, Israel was already beginning to experience shortages in certain specialties, such as internal medicine and anesthesiology. Some observers believe that relatively low physician wage levels have also contributed to the problem by encouraging emigration to high-wage countries, a shift in medical workforce from public to private health care, and abandonment of the medical profession for higher-paying lines of work.

Consequently, a consensus emerged that Israel needed to increase the number of domestically educated physicians. Views differed on the magnitude of this increase and on the ways to achieve it. While there was a consensus that total enrolment at the four existing medical schools should be increased, there were differing views as to whether Israel should open a fifth medical school. As medical schools in Israel rely heavily on state funding, it was clear that both of these ideas (expansion and addition of medical schools) would require major budgetary allocations.

Ultimately, the Israeli cabinet decided that, in addition to expanding the existing medical schools, the government would support the opening of a fifth medical school. They determined that it would be situated in the Galilee and that it should be affiliated with one of Israel's major research universities. A call for proposals was issued, several universities applied, and the tender was awarded to Bar Ilan University. The new medical school, to be based in Safed, is scheduled to open in October 2011.



3. SUMMARY POINTS

- Israel has a well-developed system of medical education and post-graduate training.
- In comparison with their US counterparts, Israeli medical schools are characterized by lower faculty-student ratios, lower costs overall, much lower tuition levels and earlier exposure to a broad range of complicated cases.
- Historically, Israel has faced a physician surplus; it is now facing a projecting physician shortage – largely because the massive influx of physicians from the FSU has run its course.
- Physicians in Israel earn substantially less than their US counterparts. In part, this is because salaries of all workers, including professionals, are significantly higher in the US, and in part, it is because, even relative to the average worker in their country, US physicians earn more than their Israeli counterparts.

- The income differential between primary care physicians and (most) specialists is also smaller in Israel.
- There are various indications that medicine has, and continues to be, a satisfying and attractive profession in Israel, overall.
- At the same time, there are certain elements of the work that apparently serve to reduce overall satisfaction, without leading all the way to deep dissatisfaction.



REFERENCES

Barzansky, B. and Etzel, S. 2003."Educational Programs in US Medical Schools, 2002-2003." *JAMA* 290(9):1190-1196.

Margalit, C. 2010, Personal communication

Clalit Health Services, 2007. *Clalit's Position on the Arbitration between the Public Employers and the Physicians' Representatives Regarding Pay and Working Conditions of Physicians* (Hebrew).

Furchtgott-Roth, D. 2009. "The High Cost of Medical Malpractice. Real Clear Markets." Accessed at<u>http://www.realclearmarkets.com/articles/2009/08/06/the_high_cost_of_medical_malpractice_97346.html</u>

Gat, A. 2010. Personal communication.

Gross, R.; Greenstein, M.; Matzliach, R.; Tabenkin, H.; Porat, A.; Heiman, A. and Porter B. 2005 *Implementing Clinical Guidelines in Primary Care Medicine in Israel: Changing Physicians' Behavior*. RR-450-05. JDC-Brookdale Institute, Jerusalem (Hebrew).

Gross, R.; Tabenkin, H.; Greenstein, M.; Bramli-Greenberg, S. and Harrison, M. 1999. "Primary Care Physicians in Israel 1997: Characteristics and Changes in an Era of Reform." *Social Security* 54:169-90 (Hebrew).

Gross, R.; Yuval, D.; Japhe, Y. and Boerma, W. 1994. *The Role of the Primary Care Physician in Israel: Preliminary Findings from a National Survey*. Jerusalem: JDC-Brookdale Institute Publications RR-216-94.

Haklai, Z. 2009. *The Health Care Professional Workforces, 2008*. Ministry of Health. Jerusalem (Hebrew).

Israel Medical Association, 2006. *Physicians on a Crossroad: The Position of the Israel Medical Association on Arbitration for Renewing the Physician-Employer Agreement* (Hebrew).

Israel Medical Association, 2007. *Physicians on a Crossroad: Recovery or Further Decline – IMA's Response to the Employers' Position* (Hebrew).

Kitai, E.; Kushnir, T.; Herz, M.; Melamed, S.; Vigiser, D. and Granek, M. 1999. "Correlation of Work Structure and Job Satisfaction among Israeli Family Physicians." *IMAJ* 1:236.

Kushnir T.; Levhar, C.; and Herman-Cohen, A. 2004 "Are Burnout Levels Increasing? The Experience of Israeli Primary Care Physicians." *IMAJ* 6:451.

Lachman, R. and Noy, S. 1996. "Reactions of Salaried Physicians to Hospital Decline." *HSR: Health Services Research* 31:2.

Lachman, R. and Noy, S. 1997. "Salaried Physicians' Intent to Retain Hospital Membership: The Effect of Position and Work Attitudes." *Hospital & Health Services Administration* 42(4):509-524

Nirel, N.; Shirom, A. and Ismail, S. 2003. *Specialist Physicians in Israel: Modes of Employment and the Implications for their Work Lives*. RR-418-03 Myers-JDC-Brookdale Institute. Jerusalem (Hebrew).

Nirel, N.; Shirom, A. and Ismail, S. 2004. "The Relationship between Work Overload, Burnout and Job Satisfaction and the Number of Jobs of Israeli Consultants." *Harefuah* 143 (11): 779-84, 840, 839 (Hebrew).

Nirel, N.; Birkenfeld, S. and Israeli A. 2007. "Has the Time Come to Transfer Residency Training from Hospitals to the Community? Lessons from Other Countries and Implications for Israel. *Harefuah* 146(6):447-452 (Hebrew).

Rosen, B. 2008. "Addressing a Projected Shortage of Physicians." *Health Policy Monitor*, March 2008. Available at http://www.hpm.org/survey/is/a11/5

Rosen, B. and Samuel, H. 2009. "Israel: Health System Review." *The European Observatory of Health Care Systems*. Available at: <u>www.euro.who.int/Document/E92608.pdf</u>

Staiger, D.; Auerbach, D. and Buerhaus, P. 2010. "Trends in the Work Hours of Physicians in the United States." *JAMA* 303(8):747-753.

Tabenkin, H. 1999. "A Look at Family Medicine in Israel: Which Physicians are More Satisfied and Why?" *IMAJ* Vol. 1:257

U.S. News and World Report. "Hot Tips for Medical School Students." Accessed October 2010 at <u>http://www.usnews.com/education/best-graduate-schools/articles/2008/03/26/hot-tips-for-medical-school-students.html</u>

APPENDIX 1: THE LOCATION OF MEDICAL STUDIES AND COUNTRY OF BIRTH OF ALL LICENSED PHYSICIANS UP TO AGE 65, IN 2003 AND 2008

	Numbers		Percent	
	2008	2003	2008	2003
TOTAL	25,542	24,577	100%	100%
By location of medical studies				
Israel	9,676	8,495	38%	35%
Eastern Europe	10,791	10,709	42%	44%
Western Europe	2,774	2,962	11%	12%
Americas	1,692	1,711	7%	7%
Asia/Africa	536	569	2%	2%
Unknown	73	131	0%	1%
By country of birth				
Israel	10,110	8,501	40%	35%
Eastern Europe	11,136	11,625	44%	47%
Western Europe	1,060	1,061	4%	4%
Americas	2,082	2,112	8%	9%
Asia/Africa	1,137	1,261	4%	5%
Unknown	17	17	0%	0%

APPENDIX 2: COMPARISON OF THE AMERICAN MEDICAL ASSOCIATION AND THE ISRAEL MEDICAL ASSOCIATION

The American Medical Association (AMA)

The American Medical Association is the largest professional association for doctors in the United States, with a mission of "uniting physicians nationwide to work on the most important professional and public health issues." Approximately 250,000 physicians are members of the AMA, although only about 135,000 are currently active in patient care. Its membership comprises less than 20% of American physicians.

The AMA is not a union and does not directly represent physicians in contracting or in setting payment rates. It does advise federal agencies and it has focused extensively on repealing the annual pre-programmed Medicare physician fee cuts set according to the Sustainable Growth Rate (which has been successfully reversed since 2003). It also played a role in blocking expansion of Medicare programs to include patients as young as 55 years.¹⁵

On other fronts – introducing national tort reform, improving payment responsiveness of payers to providers, permitting balance billing of substandard Medicare payments and modernizing antitrust laws – the AMA has had difficulty in getting traction.

Functions include:

- Publication of 10 medical journals, including JAMA (weekly circulation 300,000)
- Maintenance of the nationwide CPT coding system for medical procedures, for which coding manual sales contributes to the organization's \$70 million "books and products" revenue¹⁶
- Providing \$1 million in tuition assistance
- Ongoing advocacy on: liability reform, regulatory relief, managed care reform, public wellness
- Assistance in practice management billing, coding, human resources and benefit planning, malpractice insurance, etc.

Many question whether the AMA is truly the "voice" of American physicians. Many physicians also take membership in one of 24 specialty societies, which may be more responsive to the educational, clinical and political needs of their members. Some of the specialty societies have become quite large:

Association	Membership	
American Medical Association (AMA)	250,000	
American College of Physicians (ACP)	129,000	
American Association of Family Practice (AAFP)	94,700	
American College of Surgeons (ACS)	70,000	
American College of Cardiology (ACC)	36,000	
Total United States Physicians	900,000	

¹⁵ http://blogs.wsj.com/health/2009/12/09/docs-hospitals-insurers-oppose-medicare-at-55/?KEYWORDS=AMA

¹⁶ http://online.wsj.com/article/SB10001424052748703278604574624551991956142.html?KEYWORDS=AMA

Membership in the AMA has been gradually declining. As individual physicians opt for salaried positions in integrated health systems (in some regions approaching 50% of the workforce), the value of AMA membership is diminished.

Moreover, the AMA has had difficulty in identifying a consensus position in the American health reform debate. This was most evident with its November 2009 endorsement of the Senate and House health reform bills, in stark contrast to the near-unanimous opposition from over 20 specialty societies. In a recent survey of 4,000 physicians regarding their opinion of the AMA, 86% reported that the organization "does not speak for me."¹⁷

Keith Kanel, MD Jewish Healthcare Foundation, Pittsburgh

The Israel Medical Association (IMA)

The IMA is the representative body of physicians in Israel. It is an independent professional body representing some 95% of the country's physicians, i.e., about 20,000. Established in 1912, its mission is to ensure physicians a firm footing in a high-performance health system.

The IMA functions in the following areas:

Labor Relations

- Recognized by a Labor Court ruling as the representative labor organization of Israel's physicians, the IMA is the sole body authorized to negotiate labor conditions with employers, to sign collective agreements on wages and working conditions and to represent physicians in these areas.
- 2. Israeli law does not oblige employees to belong to a labor organization. Nevertheless, most physicians are members of the IMA and even non-members are obliged to pay organization dues, which are deducted by the employer.

The Scientific-Professional Area

- 1. Through its scientific council, the IMA is responsible for the specialization of the country's physicians, including syllabus and examinations, and recognition of specialty areas.
- 2. The IMA brings together dozens of associations and societies from all areas of medical specialization, which act from within to advance their fields. Among other things, they strive to raise professionalism, set standards of care, etc.

Quality Improvement

The IMA acts to promote and improve quality, notably via partnerships in writing up informedconsent forms and clinical guidelines.

¹⁷http://boston.bizjournals.com/boston/blog/bottom_line/2009/07/and_just_who_speaks_for_the_doctors.ht ml

Ethics

The IMA Ethics Board formulates the physician's code, which is binding on all Israeli practitioners. The board sets standards of conduct and has the authority to take disciplinary measures against members. It handles public complaints against physicians and complaints of physicians against one another.

The Legal Area

Through its Legal Department, the IMA is involved in legislation procedures affecting the medical field and working conditions. The department helps individual physicians with legal problems related to their work and represents the body of physicians at various forums.

Physician Welfare

- 1. The IMA has a physician welfare department and runs a consumers club, pre-retirement course, excursions etc.
- 2. It operates a fund to assist needy physicians and physicians in retirement homes.

International Sphere

- 1. The IMA is a member of international organizations and its representatives fill leading positions (the former IMA chairman was president of the World Medical Association).
- 2. It works with Jewish physicians in the Diaspora and holds conferences for Jewish physicians.

Information

- 1. The IMA publishes several journals:
 - a. IMAJ the Israel Medical Association Journal a professional journal in English
 - b. Harefuah a professional journal in Hebrew
 - c. *Zman Harefuah* a professional journal on various topics related to the world of physicians
- 2. The IMA has an advanced, up-to-date website presenting its activities and positions.
- 3. It participates in diverse campaigns to raise awareness of public health, such as: the Israel Medical Encyclopedia, health supplements in the daily press, special broadcasts in cooperation with the electronic media.

Health Policy

In terms of health policy, the IMA regards itself as a key player in various issues related to the health system. It has dealt with, among other things, the following:

- 1. Physician arbitration a lengthy process that ended in 2008 with a pay rise of more than 20%
- 2. Increasing the health budget the IMA believes that a good health system is one in which patient and physician alike are satisfied, the former with high-quality care and the latter with appropriate remuneration. Accordingly, the IMA strives to have the health budget increased both in the framework of budgetary discussions, in which it participates, and in

other frameworks, i.e., augmenting the number of beds in intensive care; changing the capitation formulas, etc.

- 3. Health basket for years, the IMA was represented on the committee deciding on the package of services, and consistently demanded additional allocations. When the committee composition changed to involve multiple government parties, the IMA withdrew and set up its own committee, which functions in parallel to the former.
- 4. Petitioning the High Court of Justice on the decision of the Ministry of Health to transfer funds from the health basket to dental health the IMA believes that the funds should not be transferred for this purpose but rather used for medication for the severely ill. The High Court ruled in favor of the petition.
- 5. Dealing with the shortage of physicians the IMA position is that the number of physicians should be increased and the hard-pressed specialties (where the shortage is particularly evident) made more attractive. Among other things, it conferred with the European forum on the question, and took various opportunities to make known its position.
- 6. Inequality in health the IMA established a committee to discuss the implications of health inequality. It recommended changing priorities and stipulated that physicians have a responsibility to act to reduce inequalities.
- 7. Mental health reform the IMA supported reform, though not of the sort proposed by the Ministry of Health. It feared that the latter would be detrimental to physicians in terms of wages and status, and it is taking steps to change the reform structure.
- 8. Violence against physicians the IMA is greatly concerned about the phenomenon, as it poses a danger both to physical well-being and to the physician's status. Intraorganizational work with physicians is being done on the question, and a community study is under way in cooperation with Myers-JDC-Brookdale Institute.
- 9. Intellectual property the question of patents is regulated by old, outdated legislation, which may result in physicians losing the income due to them from an invention they patented in the course of their work. The IMA takes steps to protect the physicians to the full extent of the existing law and is endeavoring to have legislation amended.
- 10. Professional limits this is one of the most important issues in the IMA's remit, as it encompasses many disciplines. The IMA deals with matters concerning relations between the medical profession and other professions, e.g., nursing, complementary medicine, etc. The issue also includes the question of the professional status of physicians in the past and present, and in relation to other professions, which have a bearing on the quality and cost of medical care.

Rachel Nissanholtz Myers-JDC-Brookdale Institute

COMPARISON OF THE ISRAEL MEDICAL ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION

Area	Israel Medical Association	American Medical Association
No. of members	20,000	250,000
Percent of physicians who are members	95%	20%
Status	Representative organization with legal/judicial status. Its power derives from its status as the physicians' representative in wage agreements and its responsibility for specialization.	Voluntary organization. Its power derives from its being the largest physicians' association. Its power is steadily declining.
Goals	Strives to ensure the stability of physicians' status and to function in a quality healthcare system by means of advanced medicine	Aims to unite all physicians in the US to work together on professional issues and health policy
Relationship to specialty societies	Usually part of the IMA	Usually function separately from AMA
Main activities	Regulates specialization; negotiates wage agreements; represents physicians' positions in various forums including government authorities, legal authorities and forums abroad	Advises government on topics such as reform of the health system and public health; maintains the CPT procedure coding system; provides assistance in practice management: coding; human resources, insurance
Main issues on the agenda	Budget Arrangements Law; transfer of the Scientific Council to the Ministry of Health ; level of health system funding; negotiating new wage agreement	Consultancy to medical associations; Medicare physician fee cuts
Publications	2 scientific journals (Hebrew and English) and one professional Journal	10 journals, including <i>JAMA</i>
Main challenges	Continued dissatisfaction with wage levels, the expansion of monitoring of physician actions by employers, and the perceived decline in public respect for physicians	The notion among physicians that the organization does not represent them