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# A report card on the physician work force: Israeli health care market—Past experience and future prospects

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#### ABSTRACT

*Background:* The worldwide shortage of physicians is due not only to the lack of physicians, but also to complex social and economic factors that vary from country to country.

*Objective:* To describe the results of physician workforce planning in a system with unintended policy, such as Israel, based on past experience and predicted future trends, between 1995 and 2020.

*Methods*: A descriptive study of past (1995–2009) and future (through 2020) physician workforce trends in Israel. An actuarial equation was developed to project physician supply until 2020.

*Results:* In Israel a physician shortage is expected in the very near future. This finding is the result of global as well as local changes affecting the supply of physicians: change in immigration pattern, gender effect, population growth, and transparency of data on demand for physicians. These are universal factors affecting manpower planning in most industrial countries all over the world.

*Conclusion:* We describe a health care market with an unintended physician workforce policy. Sharing decision makers' experience in similar health care systems will enable the development of better indices to analyze, by comparison, effective physician manpower planning processes, worldwide.

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#### 1. Introduction

More than 30 years ago, the World Health Organization (WHO) first acknowledged the need for new and drastic ways to find a solution for the chronic deficiency in medical manpower. In 1977, WHO targeted primary care medicine as the effective way to achieve "Health for All" [1] and, together with the decision from Alma-Ata in 1978

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The major obstacles [3] to the development of adequate manpower in the health system include erroneous prioritization, lack of a consistent policy, lack of future planning, poor management of manpower resources, and lack of basic and essential knowledge needed for planning but sometimes also unforeseen and unpredictable circumstances.

In the coming years a worldwide physician shortage is expected [4]. Most health care workforce imbalances

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<sup>[2],</sup> brought the issue of planning and design of manpower in the health care system to a worldwide debate. It has been concluded that the worldwide shortage of physicians is due not only to the lack of physicians, but also to complex social and economic factors that vary from country to country.

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are related to complex social, political, and economic forces that differ from country to country. The main factors influencing the shortage of physicians include long and expensive training [5], physicians' migration to other countries, changing work patterns, early retirement, career changes, gender [6], and novel technologies [7].

The state of Israel has a unique immigration policy, i.e., it provides open access to all Jewish immigrants, including physicians, at all age groups. Since its establishment in 1948, only partial data exist regarding manpower planning that take into consideration physician emigration, citizens studying abroad, career changes, and physician activity measured as full-time equivalents. The immigration policy and the lack of data make planning virtually impossible.

In this report card we describe the results of physician workforce planning in a system with unintended policy, such as Israel, based on past experience and predicted future trends, between 1995 and 2020.

We analyze past experience from 1995 and we predict future trends until the year 2020. Since we use universal factors affecting manpower planning, the conclusions from our experience may be applicable to some degree in other industrial countries.

#### 2. National data

At the end of 2008, Israel had an estimated population of 7.5 million, more than 90% of whom live in urban areas. The annual population increase is about 1.8%, of which only 11% is from immigration. By 2020 the population is expected to reach 9,021,700 [8].

Between 1990 and 2020 the adult population over the age 65 will rise from 9.9% to 12.7%. Male life expectancy will increase from 74.9 to 78.3 years, female life expectancy will increase from 78.4 years to 82.3 [8].

Health expenditure as a percentage of the gross domestic product was 7.7% in 2008 [8]. All citizens in Israel are enrollees of the four health maintenance organizations (HMOs) that operate in the health care market. The Ministry of Health is a systems regulator and also the owner of some services (hospitals, maternal and child health centers, psychiatric services). The Israel Medical Association (IMA) is the professional organization and the physicians' labor union.

#### 2.1. Physician supply [9]

Three sources for physician manpower exist in Israel: (A) about 300 graduates per year from four medical schools; (B) between 150 and 1200 immigrant physicians per year between 1948 and 1995, a gradual decrease in immigrant physicians in the years 1996–2004 and fewer than 200 immigrant physicians per year between 2005 and 2008; and (C) about 150 Israeli citizens graduate every year from medical schools abroad, the majority of whom return to Israel.

Based on the law of return, every newcomer to Israel is entitled to work in his or her profession, and the state of Israel has never regulated the influx of physicians (immigrant or Israeli). As a result, until 1988 all immigrant physicians received their medical license after a short



Fig. 1. Number of new licenses, 1990-2007 (by country of study).

clinical experience in a hospital setting. State licensing examinations for immigrating physicians were only introduced in 1988.

Four medical schools are active in Israel and are supervised by the Ministry of Education via the Council for Higher Education. The Ministry of Health deals with issues regarding physician workforce and advises regarding future needs, but is currently not involved in medical school education and thus does not influence the number of graduating medical students.

Israeli citizens studying abroad must complete a state licensing examination on return to become eligible to practice medicine in Israel.

The Israel Council for Higher Education published a report in 2002 [10] that indicated Israel will be facing a physician shortage in the near future and, therefore, Israeli medical schools need to increase their capacity from 300 graduating medical students to about 600 graduates per year.

In the past two years two additional reports, one by the Ministry of Health [11] and the other by the Council for Higher Education [12], also indicated that a physician shortage is expected and Israel must increase the number of medical school graduates either by increasing the number of graduates of existing medical schools or by opening a new medical school.

In 2009, three medical schools increased the number of medical students by a total of about 100 students and a fifth medical school is due to open in the near future with an estimated 50 medical students.

At the end of 2008 there were 33,051 physicians registered in Israel, of whom 25,542 (77%) are younger than 65 years-of-age [9]. The physician (under the age of 65 years) to population ratio has decreased gradually and reached a low of 3.46 in 2008, especially due to a gradual decrease in new licenses to immigrating physicians from the former Soviet Union (Fig. 1).

The percentage of young physicians (under 45) decreased from about 50% during 1980s to about 37% in 2008. The Ministry of Health does not collect ongoing data regarding work patterns of physicians. Therefore the data on the number of active physicians is minimal.

The percentage of female physicians in Israel is increasing steadily, from about 30% of the workforce in 1970, to 40% in 2008. Among physicians under 45 years of age, 47% Download English Version:

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