The Role of Primary Care Physicians in the Israel Defense Forces: A Self-Perception Study

Eyal Zimlichman MD, Dror Mandel MD, Francis B. Mimouni MD, Shlomo Vinker MD, Ilan Kochba MD, Yitshak Kreiss MD and Amnon Lahad MD

Medicine Branch, Medical Corps, Israel Defense Force

Key words: quality, primary care, self-perception, gatekeeper, military

Abstract

Background: The health system of the medical corps of the Israel Defense Force is based primarily upon primary healthcare. In recent years, health management organizations have considered the primary care physician responsible for assessing the overall health needs of the patient and, accordingly, introduced the term "gatekeeper."

Objectives: To describe and analyze how PCPs in the IDF view their roles as primary care providers and to characterize how they perceive the quality of the medical care that they provide.

Methods: We conducted a survey using a questionnaire that was mailed or faxed to a representative sample of PCPs. The questionnaire included demographic background, professional background, statements on self-perception issues, and ranking of roles as a PCP in the IDF.

Results: Statements concerning commitment to the patient were ranked higher than statements concerning commitment to the military organization. Most physicians perceive the quality of the medical care service that they provide as high; they also stated that they do not receive adequate continuous medical education.

Conclusions: Our survey shows that PCPs in the IDF, like civilian family physicians, perceive their primary obligation as serving the needs of their patients but are yet to take on the full role of "gatekeepers" in the IDF's healthcare system. We conclude that the Medical Corps should implement appropriate steps to ensure that PCPs are prepared to take on a more prominent role as "gatekeepers" and providers of high quality primary medical care.

IMAJ 2005;7:174–177

The Medical Corps of the Israel Defense Force, similar to many health organizations in the western world, is challenged with the demand for a high quality healthcare system while constraining healthcare costs [1]. There is a growing belief in the IDF that the primary care physician has a central role in achieving these goals. The PCP, as a "gatekeeper," is the primary case manager who treats and coordinates all aspects of patient care while constraining costs [2–5].

Primary care "gatekeeping" is a measure adopted by health management organizations to control costs or improve the quality of care, or both [6]. Patients' reactions to the initiation of primary care gatekeepers depend primarily on whether it is perceived as an attempt to limit expenditures or to ensure proper care. Thus, gatekeeping is often not well received because people rarely believe its purpose is to maintain or improve the quality of care [7,8].

PCP = primary care physician
IDF = Israel Defense Force

The practice of healthcare in the IDF is similar in many aspects to that of civilian health systems. It is essentially based upon primary care clinics, as well as secondary specialist centers and civilian hospitals and facilities

We believe, as health policymakers in the IDF, that a better understanding of PCPs' self-perception might help us to improve our healthcare system in the future. We therefore designed this study in order to: a) describe and analyze how PCPs in the IDF view their roles as primary care providers, b) characterize how PCPs in the IDF perceive the quality of the medical care that they provide, and c) analyze differences in self-perception among different clinic types.

Methods

Definitions

Over the years, the medical corps created a highly accessible primary care system that deals with an average of seven to eight visits per soldier per year [9,10]. In this health system, PCPs include general practitioners without residency training and a minority of specialized physicians in a variety of specializations. PCPs can serve as enlisted personnel, career army personnel, or civilians employed by the army. While most PCPs are young and have only a few years of clinical experience, a growing number are older, more experienced physicians. The differences between these groups are fundamental in terms of knowledge, skills and motivation, and a sense of identification with the medical corps in many cases.

For the purpose of this analysis, the various PCPs evaluated were classified according to the location of their clinic:

Active front – these clinics are the basic field clinics of the IDF that serve deployed troops in battalions, brigades and divisions, either during deployment or during training. In this setting, primary care is provided by a single general practitioner, without support from other healthcare providers except for military medics.

Military training centers – these clinics are multi-physician medical clinics usually with mental health services on site.

Home front clinics – these are also multi-physician medical clinics that employ between 2 and 10 PCPs and are supported by medics and nurse. In addition, laboratory, pharmacy and radiology services are usually available on site or nearby. Most centers also have physical therapy and mental health services, while others include various specialist services in the same building. Primary care

physicians at these clinics are usually older civilian employed GPs or specialized MDs. Differences between clinic types was also described elsewhere [11].

Questionnaire

We conducted a survey using a non-anonymous questionnaire that was mailed or faxed to a representative sample of PCPs serving in the IDF. Overall, 180 questionnaires were delivered. The physicians were asked to complete the form and to return it by mail or fax. One month after the beginning of the survey, non-complying physicians were contacted by telephone and reminded to complete and return the form. We used non-anonymous questionnaires in order to track compliant and non-compliant physicians.

The questionnaire included: a) demographic background (age, gender, service, rank, and clinic type); b) professional background (medical school, medical specialization, and years as a PCP); and c) statements on self-perception issues and ranking of roles as a PCP in the IDF. The physicians were asked to assign a score – 1 (lowest) to 5 (highest) – to indicate their agreement with each statement.

Table 1. Demographic data of study physicians

Characteristic	No. (%)
Overall	137
Age (mean ± SD)	32.2 ± 8.3
Gender	
Male	110 (80.3%)
Female	27 (19.7%)
Service	
Enlisted	60 (45.5%)
Career army personnel	40 (30.3%)
Employed civilians	32 (24.2%)
Unreported*	5
Clinic	
Active front	49 (36.6%)
Military training centers	34 (25.4%)
Home front	51 (38%)
Unreported*	3

* Unreported data were excluded from the analysis.

Statistical analysis

Statistical analysis was conducted using the Statistical Analysis System (SAS Institute Inc, Cary, NC, USA). Variables were first tested for normality. ANOVA was used to determine the significance of differences in the results between the three clinic settings. Individual differences between two specific clinic settings were then determined using the Tukey family test. Whenever variables did not distribute normally we used the Wilcoxon rank sums tests and a Bonferroni correction. For dichotomic variables we used the chi-square test. Results are expressed as mean ± SD. A P value of <0.05 was considered significant. All tests were two-tailed. To test the confounding effect of physician characteristics, we dichotomized the answers to the questionnaire to high and low near the median. Applying logistic regression we used each question as the outcome and the physicians' characteristics as a co-variant.

Table 2. PCPs' professional background

Characteristic	Total (n=137)	Active front (n=49)	Training center (n=34)	Home front (n=51)
Country of medical education* (%)				
Israel	63.8	75	74.2	45.8
Eastern Europe and Asia	27.6	16.7	22.6	41.7
Western Europe and North America	8.6	8.3	3.2	12.5
Specialized physicians (%)*	10.9	8.3	0	20.4
Years working as PCP (mean ± SD)**	3.7 ± 5.3	2 ± 1.6	3 ± 4.2	5.2 ± 6.7

* $P < 0.05$ for either active front or training center vs. home front
** $P < 0.05$ between the groups using non-parametric test.

Results

Of 180 questionnaires 137 were returned for analysis (76%). From a demographic standpoint [Table 1], most PCPs were male enlisted personnel from the home front, training centers or active front unit clinics. The demographics and clinic types of the PCPs who did and did not return the questionnaire were similar. Specialization and experience as a PCP and country of medical school graduation are presented in Table 2. Primary care physicians who served in home front clinics were more experienced, a higher percentage of them graduated from a medical school in Eastern Europe or Asia, and many more had a specialist board certification, compared to PCPs in other clinic settings. Specialized physicians had a board certification in a variety of specializations (three in family practice, three in internal medicine, three in surgery and various others).

The ranking of PCPs' roles, as described in the questionnaire, is summarized in Table 3. When all PCPs from different clinic settings were pooled together, they gave an average score of >4 out of 5 in all statements relating to their commitment to patient care or patient rights (first five statements of Table 3). For issues related to their role as gatekeepers (last four categories in Table 3), they gave a lower average score of <4.

In terms of their self-perception of adequacy, satisfaction with their work ranked at an average of 3.9, and quality of care at 4.0. However, adequacy of former training and current continuous education ranked lower, at 3.5 and 2.9 respectively.

Significant differences among the clinic settings were found in the statements concerning economic consideration and army needs: physicians from home front clinics regarded them as more important than did physicians from training and active front clinics. Differences were also found regarding the statements on satisfaction with work as a PCP, quality of service, and former medical education [Table 3].

The results of ranking PCPs' roles did not change using the logistic regression and controlling for gender, age, level of

GP = general physician

Table 3. Ranking of primary care physicians' roles*

	Total	Active front (1)	Training center (2)	Home front (3)	*P*
Ranking of PCPs' roles					
To coordinate all patient care	4.7±0.5	4.7±0.5	4.7±0.5	4.7±0.6	NS
To identify and follow chronic and complex patients	4.6±0.7	4.7±0.5	4.7±0.6	4.5±0.9	NS
To promote health issues and preventive medicine	4.4±0.8	4.4±0.8	4.5±0.8	4.4±1.0	NS
To counsel patients on health issues	4.3±0.8	4.3±0.9	4.4±0.7	4.3±0.9	NS
To represent the patient's health status vis-à-vis his commanders	4.3±1	4.5±0.9	4.2±1.0	4.2±1.0	NS
To have exclusive referral rights to specialist clinics	2.7±1.1	3.0±1.0	2.6±1.3	2.6±1.1	NS
To have exclusive referral rights for tests and imaging	3.7±1.1	3.6±1.1	3.7±1.1	3.8±1.1	NS
To weigh economic considerations in patient management	3.2±1.3	2.9±1.2	2.8±1.3	3.6±1.2	0.002**
To consider army needs in patient management	3.7±0.9	3.4±0.9	3.8±0.8	3.9±0.9	0.004****
Self-perception					
I am satisfied with my work as a PCP	3.9±1.1	3.8±1.1	3.7±1.2	4.2±1.0	0.049***
I am providing high quality medical care service	4.0±0.9	3.8±1.0	3.9±0.8	4.4±0.7	0.003**
My former medical education allows me to provide high quality medical care	3.5±1.1	3.3±1.0	3.3±1.1	3.9±1.0	0.004**
During my service as a PCP, I receive adequate education	2.9±1.4	2.8±1.3	2.8±1.3	3.2±1.4	NS

* Numbers represent average scores on a 1 to 5 scale ± standard deviation
** $P < 0.05$ for all comparisons.
*** $P < 0.05$ for 2 vs. 3 only.
**** $P < 0.05$ for 1 vs. 3 only.
NS = not significant.

education, service type, seniority, and being a specialist. Using the some model eliminated the significant effect of clinic type on all self-perception questions. This was due to the high correlation between serving in a specific clinic and many other variables (active front clinic physicians are younger, do not have specialization, and all are men with little experience in medicine).

Controlling for all the above variables, employed civilians were more likely to answer *high* for the statement "To identify and follow the chronic and complex patients," men were more likely to answer *low* for "To counsel patients on health issues" and "During my service as a PCP, I receive adequate education," and *high* for "To weigh economic considerations in patient management," while the number of years working as a PCP increased the likelihood of answering *high* on the statement "To counsel patients on health issues." All other variables were not significant. A discussion of the influence of these variables is beyond the scope of this article.

Discussion

The dual commitment of army physicians as primary care providers and as officers in a military organization has the potential to lead to daily personal conflicts. The results of this study show, above all, that the PCPs in the IDF perceive their primary role as case managers of their patients. The typical PCP, irrespective of the clinic setting, viewed his responsibility first to the patient and only then to the army.

A probably less intense conflict exists also in civilian primary care settings. Tabenkin et al. [12] reported that, similar to our findings, civilian PCPs in Israel view their primary obligation as providing medical care to all patients, and consider their obligation to the healthcare organization only secondary. Indeed, the definition of the role of family physicians – formulated in the specialization syllabus by WONCA (World Organization of National Colleges, Academies and Academic Associations of General Practitioners) [13], and as viewed by the World Health Organization [1] – includes coordination of all patient care, preventive medicine, treatment of the chronically ill, and counseling on health-related matters. According to our findings, PCPs in the IDF, even though most were not specialized family physicians, agreed that they should actively fill these roles, thus assuming the position of the PCP in the IDF's healthcare system.

Regarding their role as "gatekeepers," PCPs gave scores that were lower than those given for items related to their commitment to patient care. This is interesting in view of the fact that PCPs in the IDF serve as full gatekeepers. From this we infer that PCPs in the IDF have yet to fully understand and take on the role of gatekeeper in the healthcare system. We contend that PCPs feel incapable of taking on the role of gatekeepers from a professional point of view, but try to satisfy the patients by allowing them direct access to specialists. In order to accept such a role, physicians must understand the needs and limitations of the healthcare organization and must feel committed to the organization. This may require more extensive training both in the field of medical economics and in primary care medicine, in order to enable PCPs to make appropriate decisions regarding treatment and referral of patients to advanced medical services (including access to specialists) [5,14].

In contrast to the self-perceived roles related to patient care, we observed significant differences among PCPs from different clinic settings regarding issues related to the healthcare system. Indeed, physicians serving in active front clinics considered these issues less important than did physicians serving in home front clinics.

According to our analysis, these younger, more idealistic and less experienced physicians feel that the patients' interests would be better served if they were allowed free access to all healthcare services. We speculate that PCPs serving in active front units feel more committed to their patients. In these units the physicians live within their unit and among their patients; therefore, when treating them, they consider their patients' needs above other considerations.

When regarding the findings on self-perception remarks it is clear that PCPs in the IDF believe that they provide a high quality medical care service. However, home front physicians perceive their quality of healthcare to be higher than that perceived by physicians at active front or training center clinics. This can be explained by the fact that home front PCPs are older and more experienced, and there is a higher percentage of board-certified specialized physicians among them.

Another important finding in this survey is that PCPs in the IDF believe that they do not receive adequate education during their service. Although not significantly different, this was more prominent in the active front units and the training centers, where doctors are stationed far from academic teaching centers and access to continuing medical education is therefore difficult. These findings support the need for more efficient CME programs, especially distant learning such as web-based teaching. Indeed, the IDF medical corps has lately begun implementation of such programs.

The finding that active front PCPs believe they are not practicing high quality medicine, that they need more education and that they should not act as gatekeepers is somewhat worrisome. Acting as gatekeepers demands that the PCP be professionally qualified in all aspects of primary care apart from clinical issues, such as preventive medicine, health promotion, health economy, socio-psychological issues and cost-effectiveness. While these issues are similar for most PCPs, they should be adjusted for army PCPs, especially for the unique position of the active front battalion PCPs who are sometimes engaged in military conflict operations. We suggest that medical corps commanders address this important issue by adjusting basic education programs, initiating adequate CME programs, assigning more experienced physicians for active front units, and enhancing the commitment of these physicians to the medical corps.

A potential limitation of our study lies in the lack of anonymity of the survey. In theory, the motivation to please army commanders may have led some PCPs to exaggerate the importance of roles that take into account army interest. In this regard the motivation of hired physicians and career physicians may have differed. Nevertheless, we do not believe that such bias occurred for several reasons: a) the questionnaire was clearly labeled as a research questionnaire and originated from the quality management research department, whose surveys are known to respect the anonymity of responders; b) while the 'need to please' army commanders may have influenced the responses to the questionnaire to some extent, the differences observed according to the type of clinic remain meaningful. In fact, the 'need to please' army commanders should have prompted the PCPs to emphasize their role as gatekeepers (in order to serve the financial interests of the IDF), which they did not do. On the contrary, the typical PCP viewed his main responsibility to the patient and only then to the army.

According to our survey, PCPs in the IDF, like civilian family physicians, stated that their primary obligation is to serve the needs of their patients – including coordination of all patient care, preventive medicine, treatment of the chronically ill, and counseling on health-related matters. However, they are yet to take on the full role of gatekeepers in the IDF healthcare system. While believing that they provide high quality healthcare, PCPs request a higher level of medical education during their service. We therefore conclude that the medical corps, as the health provider of the IDF, should implement appropriate steps to ensure that all PCPs are adequately prepared to take on a more prominent role as gatekeepers and providers of high quality primary medical care.

CME = continuing medical education

References

1. Boerma WGW, Fleming DM. The Role of General Practice in Primary Health Care. Geneva: World Health Organization, 1998.
2. Safram DG, Taira DA, Rogers WH, Kosinski M, Ware JE, Tarlov ARA. Linking primary care performance to outcomes of care. *J Fam Pract* 1998;47:213–20.
3. Institute of Medicine. Definition of Primary Care: An Interim Report. Washington, DC: National Academy Press, 1994.
4. Grevas J, Perez-Fernandez M, Starfield BH. Primary care, financing and gatekeeping in Western Europe. *Fam Pract* 1994;11:307–17.
5. Stephens AG. Gatekeeping issues. *J Fam Pract* 1994;29:472–4.
6. Dudley RA, Luft HS. Managed care in transition. *N Engl J Med* 2001;344:1087–92.
7. Bodenheimer T, Lo B, Casalino L. Primary care physicians should be coordinators, not gatekeepers. *JAMA* 1999;281:2045–9.
8. Gross R, Tabenkin H, Brammli-Greenberg S. Who needs a gatekeeper? Patients' views of the role of the primary care physician. *Fam Pract* 2000;17(3):222–9.
9. Gilutz H, Shamis A, Ben-Amitay D, Burger A, Caine YG. Primary quality control in Israel Air Force clinics. *Harefuah* 1994;126:570–3 (Hebrew).
10. Mandel D, Amital H, Zimlichman E, et al. Quality assessment program in primary care clinics: a tool for quality improvement. *Int J Qual Health Care* 2004;16(2):175–80.
11. Zimlichman E, Afek A, Mandel D, et al. Army personnel satisfaction in different settings of primary health care clinics. *Milit Med* 2004;169(5): 385–8.
12. Tabenkin H, Gross R, Bramli-Greenberg S, Steinmetz D, Elhayany A. Primary care physicians in Israel: self-perception of their role in the healthcare system and policy makers' and patients' perception of them as gatekeepers. *IMAJ* 2001:3:893–7.
13. WONCA. The role of the general practitioner/family physician in health care systems: a statement from the World Organization of the National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians. Melbourne, Australia: WONCA, 1991.
14. St. Peter RF, Reed MC, Kemper P, Blumenthal D. Changes in the scope of care provided by primary care physicians. *N Engl J Med* 1999;341:1980–5.

Correspondence: Dr. E. Zimlichman, Dept. of Medicine B, Sheba Medical Center, Tel Hashomer 52621, Israel.
Phone: (972-3) 530-2661
Fax: (972-3) 535-2855
email: zimlich1@zahav.net.il