Brief Report

Waiting Time for First Outpatient Visit in Specialty Level: Assessing the Provider Related Factors

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Abstract

Background: Recently, there is an increased focus on waiting time as a barrier to access to treatment in outpatient services. The aim of this study is to determine related factors to outpatient waiting time in specialty levels.

Method: This was a cross sectional study. The target population of this study consisted of specialist's and subspecialist's offices in Tehran. All the population (5475 cases) was studied; however 43.4% of them were not accessible. Accessible cases consist of 3098 physicians were included. Data gathered by telephone interview and analyzed by SPSS.

Results: According to the findings, the level of care; type of specialty, being a faculty member, and office location was related to waiting time ($p < 0.001$). Waiting time was also correlated with the number of outpatient offices and clinics of each physician ($r_s = 0.11$, $P < 0.001$), as well as office working hours per week ($r_s = -0.18$, $P < 0.001$).

Conclusion: The estimated waiting time was acceptable, but the range of this parameter was too wide. This situation was more severe for some specialties and need some consideration. It should be considered that this study was restricted to Tehran. Waiting time is likely to be higher in other provinces of the country especially in deprived areas.

Keywords: Medical specialty, outpatient care, waiting list

Introduction

The shift from inpatient to outpatient care is drawing attention to the role of the outpatient clinics. An increased focus on waiting times for outpatient visits has made it necessary to develop new strategies for managing this feature in outpatient services.[1]

Waiting time is fundamental to the quality of health care as one of indicators for measuring accessibility.[2,3] Also waiting time is an important determinant of patient satisfaction.[4,5]

Previous studies showed that reduced waiting times are associated with improved patient satisfaction.[6]

Defining waiting time and selecting its scope is the first step in determining and prioritizing waiting time. Different countries have different definition of waiting time with respect to their health system processes.[4,7]

Most studies conducted to date have focused on three distinct waiting periods: waiting to see the specialist, waiting to receive hospital-based services, and total waiting time. In these studies the waiting time for specialist consultation has been defined as the time between the referral from the primary care practitioner to the medical specialist consultation.[4]

Many countries have tried to estimate waiting time for managing

it. There are two main methods for estimating waiting time:

Firstly, objective measures were used to estimate the amount of waiting time directly. For example, in 2008 a total waiting time from primary care referral to specialist visit were measured for seven digestive diseases in Canada. The results showed, the median of waiting time varied between 26 to 141 days according to the probable diseases.[8]

The second type includes using subjective measures and defining the percentage of patients who experienced long waiting time according to patients' opinion.[2,9] For instance, another study in 2005 reported approximately 20% of Canadians claimed adverse effects including worry, stress and pain, due to the delay in receiving health care.[2]

Both methods can provide useful information about the health system. Yet, the most important factors in method selection are study objectives and available resources.

In Iran; by implementation of family physicians and referral plan; general practitioners were employed as the first line of the outpatient visit in rural areas and cities with less than 20,000 populations. However, this plan has not implemented in the whole country, consequently in many urban areas and large cities medical specialists are still in the first step of providing outpatient services.[10]

Owing the above mentioned fact, studying waiting time in this step will help the health managers to improve population accessibility to health care and treatment outcome. This study aims to determine provider related factors that affecting specialists waiting time in Tehran Iran.

Materials and Methods

This was a cross-sectional study. The target population of the

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study was specialists and subspecialists who practice in Tehran. Census sampling method was used for studying the population.

In order to prepare a list of physicians, data from two major physician data banks was used including the Medical Council of Islamic Republic of Iran and the White Book (Ketab-e-Sefid).[11] Contact Information of 5475 physicians was extracted from these data banks. After telephone interviews, we determined that 313 cases were either retired, migrated, or no longer alive and 1921 cases were inaccessible due to the wrong or changed phone number. Therefore, 60 % of the population was accessible. Out of all the accessible cases, 135 physicians did not accept new patients, and 8 cases refused to be interviewed. Thus, 3098 cases (99.7%) were included and analyzed in the present study.

Data acquisition method which described in previously published article,[4] is briefly presented here. Waiting time in this study was defined as the time between the call for registration and the appointment date.

During a telephone interview, the soonest date for visiting a new patient was inquired according to the physician's waiting list.

The questionnaire consisted of ten questions: physician's name, physician's sex, office phone number, office address, type of specialty, faculty membership, date of contact, visit date, office working hours in a week and number of other offices, clinics and outpatient centers of each physician. We extracted the initial five questions from the data banks and the remainders of questions were completed by telephone interviews. Three trained interviewers used a uniform structured interview for data gathering completing questionnaires.

Phone calls were mostly made to physician's office between 4 PM to 9 PM on working days. If it was needed, repeated phonecalls were made in the morning of other working days.

After controlling data quality, SPSS statistical software was used for data analysis. According to the result of normality test, Man-Whitney and Wilcoxon non-parametric, as well as Spearman Correlation were used for data analysis.

Results

In this study, 3098 physicians were enrolled. Some of the studied characteristics of physicians are provided in Table 1. Data analysis shows that the median of waiting time was two days for specialists (mean = 4.3, SD = 8.1) and three days for subspecialists (mean = 7.6, SD = 14.0).

The analysis of physician waiting time and characteristics show that subspecialist had longer waiting list than specialists (p < 0.001). Waiting time was not similar in different type of specialties (p < 0.001). Dermatologists, neurosurgeons and psychiatrists (specialists) as well as endocrinologists (sub specialists) had the longest waiting time for consultation. (Figures 1 & 2). Physicians who had educational situation and were faculty member had longer waiting time (p < 0.001). The geographical area of physician's office was significantly associated with the waiting time (p < 0.001).

Physicians working hours during the week had a negative relation with physician's waiting time (r_s = -0.18, P < 0.001). Also increasing the number of physicians' outpatient offices and clinics will slightly increase the physicians waiting time (r_s = 0.11, P < 0.001). There was no significant association between Physician's gender and their waiting time.

Discussion

According to the result of this study, the median waiting time for specialists' first visit was two days. It should be considered that the waiting lists of about 7.5 % of respondents were longer than 10 days and for 2 % longer of them were longer than 30 days.

Table 1. Frequency of characteristics of physicians including specialists and subspecialists

	Number	Percent
Sex		
male	2461	79.4
female	637	20.6
total	3098	100.0
level of care		
specialist	2585	83.4
subspecialist	513	16.6
total	3098	100.0
Faculty member		
yes	1229	39.7
no	1044	33.8
missing	825	26.5
total	3098	100.0
Office district*		
North district	1080	39.4
South district	94	3.0
West district	194	6.3
East district	387	12.5
Central district	1339	43.2
missing	4	0.1
total	3098	100.0
Hours of working in office in a week**	14.6	8.9
Number of outpatient centers for each physician **	1.7	0.8

*22 districts of Tehran were classified in to 5 main districts according their geographic area. Districts 1, 2 & 3 defined as north district. Districts 15, 16, 17, 18, 19 & 20 were defined as south district. Districts 5, 9, 21 & 22 were west district. Districts 4, 8, 13 & 14 were defined as east district and the other districts (6, 7, 10, 11 & 12) were considered central district; ** The presented values for these parameters are mean and standard deviation (SD) respectively.
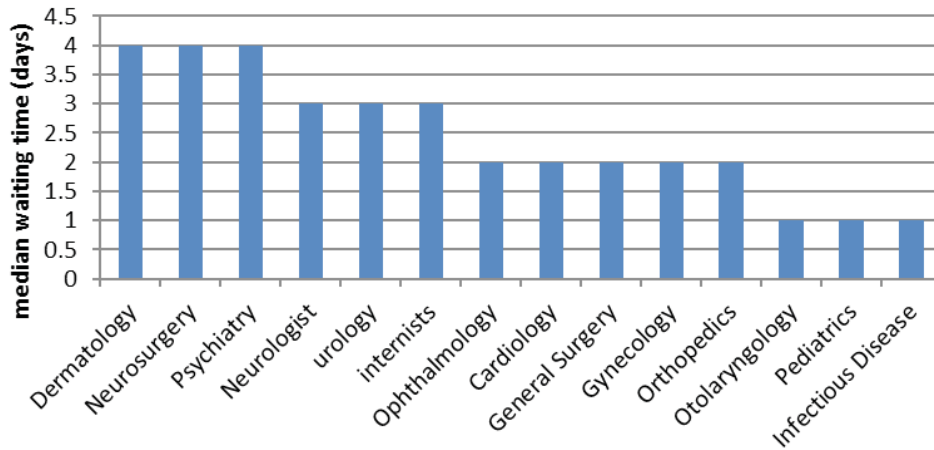
Figure 1. Waiting time for specialist first outpatient visit
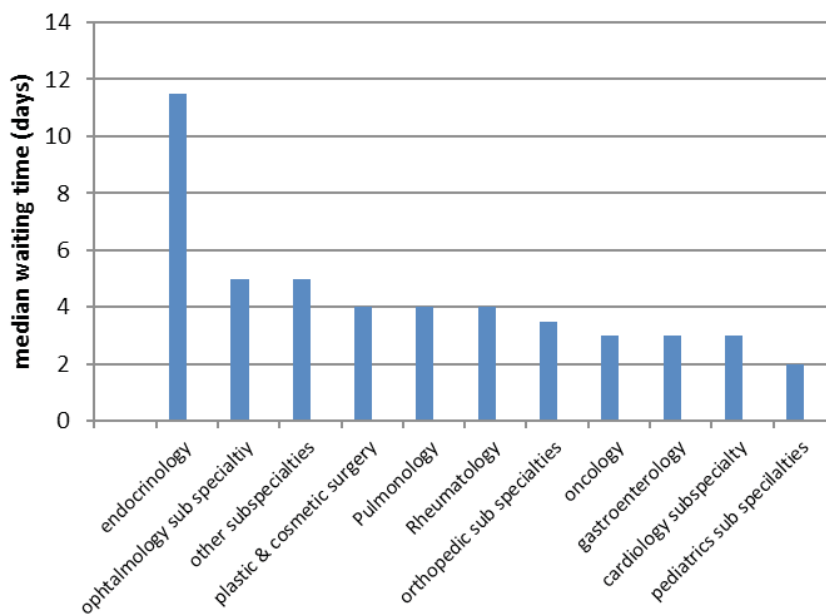

Figure 2. Waiting time for subspecialist first outpatient visit

The waiting list was longer for visiting subspecialists than specialists. This finding indicated that; the number of subspecialists is less than specialists but the demand for visiting by subspecialists is not less too. The reason of this situation should be investigated. It seems that providing better information to patients will help them in selecting a suitable level of care. Minor changes in the processes and regulations of the health system will be helpful in tracking patients through the system in non-restricted health systems; like our country.[4]

The type of specialty was another factor that affected waiting time for consultation. The waiting lists of some specialties are more crowded. It means that, the supply demand for all specialties is not the same and some specialties have longer queues for first outpatient visit.

Most of the physicians, who were encountered by excess demands, block their waiting lists that restrict the access of patients to their expertise. However, solutions to this problem are as follows: reviewing educational capacities for medical students according the current needs and demands (long-term solution), designing a limited referral system for some specialties who have longer waiting lists such as endocrinology and launching multi-disciplinary clinics (short-term solution). These suggestions should be examined in more specific studies.

Due to more demand for their services or less time in their private practice, physicians who were faculty member of a university had longer waiting lists than others. Implementing the act of "geographic full time system for academic hospitals" by Iran ministry of health and medical education could effect on this factor.[12]

This study showed that physician in some regions (north and center of the city) had longer waiting lists. The impact of geographical area on waiting time was also studied in Canada.[13] This finding may have two possible reasons in our study: accessibility of offices in these regions especially in central area and reputation of physicians of these regions. Future studies on this finding are therefore recommended to reveal the main causes.

This study showed that reducing the office hours may increases

the waiting list. This is rationally expected. Physicians who work in several outpatient centers may also have longer waiting list. It seems that this factor is related to offices' working hour, because working in several offices will decrease the working time in each office.

It should be considered that the population in this study was restricted to Tehran city that have more specialists and patients as well as a better access to healthcare system.[4] It seems that decreasing the proportion of physician to the population in some provinces or areas may increase the waiting time for specialists and subspecialists' consultation.

Acknowledgments

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