
Selected management practices of physicians in Queens, New York

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Keywords

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Abstract

This study examines management practices of private physicians in the operation of a private medical practice. More specifically, the study attempts to explain the relationship between certain characteristics of physicians and the utilization of the four basic management functions; and to determine the extent to which physicians draw upon, implementing, or operating their medical practice.

The study collected information on the current management practices of a sample of physicians along with information about their characteristics such as age, gender, years in practice, area of practice, number of patients served, and the size of staff. This is a descriptive study in relation to planning, organizing, leading and controlling functions of management.

The sample consists of one hundred subjects selected systematically from a population of 756 physicians in the borough of Queens in the City of New York. The data base was provided by the Medical Society of the state of New York. The principal statistical approaches used in analyzing the data were chi square to determine any existing relationships. Where it was determined that relationships existed, multiple regression analysis technique was employed to determine more exactly the nature of the relationship. In general, these tests were used to test the hypothesis that management practices were independent of the physicians' characteristics.

In the conclusion of this study, a large number of management practices have been investigated. It was found that in all cases except one, there was no statistically significant relationship between the physicians' characteristics and their utilization of four basic management functions. The hypotheses of independence were accepted. Where the number of staff was dependent on the leading function, the hypothesis of independence was rejected.

It was also noted that the physicians viewed the four basic management functions as critical to the survival of their private practice.

Introduction:

One of the greatest challenges confronting private medical practitioners today is the adoption of better management practices. The adoption of better management practices, with an eye toward increased efficiency, is critical if private practitioners, as we know them today, are to continue to survive (Duncan and Thran, 1985, p. 1). There have been several developments in the field of medical practice which have affected the private practitioner. One of the principal developments has been the increasing competition among doctors for patients and the medical dollar (Duncan and Thran, 1985, p. 1).

Competition has increased as a result of the two factors. First, there has been an increase in the supply of doctors resulting in increased competition for patients (Tarlov, 1986, p. 25). Secondly, Robert Pear (1987), a reporter for New York Times, states that the emergence and growth of health maintenance organizations have added a second dimension to the competitive struggle for patients (p. 1, 10). One of their major appeals is that they offer lower costs to the consumer. For example, Louis Harris associates found in a survey of a sample of HMO members and eligible non-members that nearly 60 percent of the former and only 21 percent of the latter were "very satisfied" which the cost they and their families paid for health care (Taylor and Kegay, 1986, p. 84).

Beyond these developments, there are other factors which are now bringing pressure on the private physician to adopt better management practices and to become more efficient. The operating costs of private physicians have skyrocketed. One of the principal reasons for this increase is the high premium rates the physician has to pay for malpractice insurance (Duncan and Thran, 1985, p. 1). Robert Reno (1988), a reporter for Newsday, reports that today, 11 cents out of every dollar we pay in doctor bills is used by the doctor to pay for his malpractice insurance (p. 49).

Another important development which augments the physicians' need to improve their management practices is the growing intrusion of federal, state and local governments into the medical field. Pear reports that:

The independent private practice of medicine is being constrained by Government regulations... Medicare's system of paying doctors has become so complex that the A.M.A. said in its weekly newspaper, that it was unintelligible to doctors and patients (p. 10).

Red tape and paper work confronting the physicians have grown enormously as local, state and federal governments have become more involved in supporting medical care for their citizens. Not only has the volume of paper work increased, but the need for accurate record keeping has grown immensely important to the physician (Batson, 1983, p.33-36). While the costs for meeting these requirements have been increasing, the government has begun to regulate the fees which physicians can charge, adding additional pressure to improve management practices and reduce operating costs (Duncan and thran, 1985, p.1)

Thus, physicians must find ways to manage their practice more efficiently and reduce costs in order remain competitive in a field which is growing more competitive daily. Dr. Howards (1987), a professor of Urology at the University of Virginia, put it bluntly: Physicians are being reduced to businessman (p. 10). Maynard (1984) states:

If the private sector is to grow, it must set its house in order by efficient management of its activities, and this means that it must control the costs, quantity and quality of private health care.

In summary, during the past two decades, the medical field has experienced many changes, which have directly affected the practicing physician. Some of these changes have had the effect of weakening the competitive position of the physician in providing medical care at reasonable costs. If the private physician is to survive, it is crucial that he or she strive to adopt the most efficient and effective management practices possible.

Purpose of the study

It appears that effective management practices (planning, organizing, leading, and controlling) are applicable across diverse fields of business and professional practices. This means that such management practices are needed by private practitioners of medicine as well as the traditional business firm.

Statement and significance of the problem

This study was conducted to provide information that can be used by the physicians to improve the performance of management practices. The information derived from this research should be useful to the physicians in private practice in considering a modification of administrative procedures and office operations where necessary. Since the survival of the private practitioners of medicine is currently in question due to increased competition, high premiums for malpractice insurance, the growing importance of HMO's and the growing intrusion of federal, state and local government into the medical field, therefore, the nature of the management practices of physicians has become crucially Important. It is probable that there is a very high correlation between the management practices of physicians and the economic survival of their private practices. The adoption of effective management practices is critically necessary if the physician in private practice is to take positive steps towards becoming more efficient and competitive.

Research Question and Hypothesis

The major research question of this study is, “How does the adoption of effective management functions affect the operation of a private medical practice?” In attempting to answer the above question the following hypothesis was formulated and investigated.

Hypothesis

The major hypothesis of the study is: “There is no relationship between the performance of management practices by private physicians and certain characteristics of their operations.” Alternatively, the hypothesis may be stated: “The performance of management functions by private physicians is independent of certain characteristics such as length of time in practice, age of physicians, seize of staff, gender, number of patients served, and the area of practice”.

Research Limitation

The study utilized a questionnaire to solicit information from a sample of private physicians in the Borough of Queens, New York. There are certain assumptions inherent in such a research approach. The assumptions underlying this study are:

- (1) The sample of 100 respondents represent the universe of physicians in the Borough of Queens, New York from a population of 756 physicians.
- (2) A systematic sample of 100 Queens’s physicians may or may not yield results representative of all physicians.
- (3) The investigator may not be permitted to examine the confidential records of each physician. Therefore, it may not be possible to do a thorough check of the accuracy of some of the data supplied by the respondents.

The research Model and Discussion

A management model, drawing on the work of scholars has been developed and is used as the conceptual framework of this study. Scholars differ as to the specific details of the structure of management model. This study, after a review of literature, developed a consensus base on several management models. The research model combined the Process Approach with the work Activities Approach. In addition, the model incorporates consideration of the impact that environmental variables have on managers of medical practices. The essence of the model is outlined in table

Table 1. Research Model for studying the Management Practices of physicians in private practices.

ENVIRONMENTAL VARIABLES					
GOVERNMENT	LEGAL	ECONOMIC	SOCIO-CULTURAL	TECHNOLOGICAL & POLITICAL	
MANAGEMENT MODEL					
PLANNING		ORGANIZING	LEADING	CONTROLLING	
ACTIVITIES					
Input -----		Processes -----		Output	
1. Staff		1. Patient appointments		1. Well patients	
2. Equipment		2. Patient treatment		2. Accurate Records	
3. Building		3. Written and oral		3. Good will	
4. Medicine		Communication			
5. Supplies		4. Referrals			
6. Patients		5. Accounting and			
		Billing			

Source: Boone and Kurtz. Principles of Management. New York: Random House, 1984, pp. 41-46; Hampton, D.R. Management. New York: McGraw-Hill, 1986, pp.89-90; Steiner, Miner and Gray. Management, Policy, and Strategy. New York: MacMillan Publishing Company, 1982, pp. 22-30; John A Parnell. Strategic Management. Theory and Practice Academic Media Solution, 2017, pp. 21-67

Methodology

Profile of Subjects

- a) Age
- b) Sex
- c) Years in practice
- d) Area of Practice
- e) Number of patients served per week
- f) Number of staff employed

Age

The average age of the respondents was 50 years. The majority of the respondents, seventy-nine percent, fell between the ages of 36 to 65. The numbers of respondents at other extreme age groups, 26-35 and 66 and over, were smaller. Each of these groups constituted about nine percent of the total respondents. In analyzing the data, the respondents were broken down into 5 age groups to determine the effect of age on the observed phenomena.

Sex

Sixty-four percent of the respondents were males and thirty-six percent were females. As mentioned earlier, the sample consists of 100 subjects selected systematically from a population of 756.

Years in Practice

The average number of years that the respondents have been in practice was 12 years. The majority of respondents, that is, sixty-five percent, fell between 5-14 and 20 and over years in practice.

Area of Practice

General practitioners and internists constituted thirty percent and fifty-eight percent respectively. These are primary care physicians who are highly trained diagnosticians and are capable of treating a wide variety of illnesses.

Number of Patients served per week

The average number of patients served by the respondents per week was 77. The majority percentage of patients served, that is, eighty-one percent, fell between 51 and 100 patients per week. The number of patients served between 1-6 people, while about ten percent employed 6 or more people.

Number of Staff Employed The average number of staff employed by the respondents was 3. The majority of the physicians, that is, eighty-seven percent, employed between 1-6 people, while about ten percent employed 6 or more people.

Physicians' Characteristics and How They View the Importance of Office Operations

First, physicians were asked "How important do you see the administrative aspects of your practice?" The choice of responses was: (a) Not too important, (b) important. And (c) extremely important. Cross tabulations were made between the physicians' characteristics (age, gender, years in practice, and area of practice) and their view of importance of office operations. The chi-square method was used to determine whether there was any relationship between the physicians' characteristics and their view of importance of office operations. Table 2 presents the physicians' responses as they relate to their view of the importance of office operations.

Table 2. Frequency and Percentage Distribution of Physicians' View of the Importance of Office Operations by selected characteristics.

IMPORTANCE OF OFFICE OPERATIONS

AGE	NOT TOO IMPORTANT		IMPORTANT		EXTREMELY IMPORTANT		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
26-35	1	11	4	44	4	44	9	
36-45	3	11	17	61	8	28	28	
46-55	1	4	10	43	12	52	23	
56-65	5	18	20	71	3	11	28	
66 or Over	0	0	7	70	3	30	10	

TOTAL	10		58		30		98	
AVERAGE		10%		59%		31%		100%

$\chi^2 = 13.33$

Level of Significance = .1007

SEX	NOT TOO IMPORTANT		IMPORTANT		EXTREMELY IMPORTANT		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
MALE	8	13	35	55	21	33	64	
FEMALE	2	6	24	69	9	26	35	

TOTAL	10		59		30		99	
AVERAGE		10%		60%		30%		100%

$\chi^2 = 2.13948$

Level of Significance = .3431

YEARS IN PRACTICE	NOT TOO IMPORTANT		IMPORTANT		EXTREMELY IMPORTANT		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
1-4	1	7	8	53	6	40	15	
5-9	3	14	13	62	5	24	21	
10-14	0	0	14	64	8	36	22	
15-19	2	11	10	53	7	37	19	
20 and over	4	18	14	64	4	18	22	

TOTAL	10		59		30		99	
AVERAGE		10%		60%		30%		100%

$\chi^2 = 6.9388$

Level of Significance = .5432

AREA OF PRACTICE	NOT TOO IMPORTANT		IMPORTANT		EXTREMELY IMPORTANT		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
GENERAL PRACTICE	3	8	21	58	12	33	36	
INTERNISTS	6	10	36	62	16	28	58	
OTHER	1	25	1	25	2	50	4	

TOTAL	10		58		30		98	
AVERAGE		10%		59%		31%		100%

$\chi^2 = 2.61$

Level of Significance = .6250

According to table 2, which relates to the age of the physicians, it is seen that on average, only ten percent felt that office of operations was not too important to the medical practice. The

youngest age group (ages 26 – 35) and the middle age group (ages 46 – 55) appear to give more importance to office operations than the other three age groups. Among these two groups the middle age group felt stronger than the youngest age group. Fifty-two percent of the middle age group felt that office operations extremely important compared to forty-four percent of the younger age group. On average, thirty-one percent felt that office of operations were extremely important. Moreover, there was a statistically significant relationship between age and their view of importance of office operations at the 10 percent level.

This findings is consistent with findings regarding the relationship between the physicians' years in practice and their view of the importance of office operations. The great majority of physicians indicated they thought office operations were important or extremely important regardless of the number of years they had been in practice. On average, only 10 percent indicated that they felt office operations were not too important. The chi square analysis indicated that years in practice did not influence, to a statistically significant degree, the physicians' view of the importance of office operations in their practice. (Table 2).

In reference to gender and the importance of office operations, on average, only 10 percent indicated that they felt office operations were not important while sixty percent felt they were. Also, Thirty-three percent of male physicians felt that office operations were extremely important compared to twenty-six percent of the female physicians. Statistically, there was no significant relationship between gender and the importance given to office operation at the 10 percent level (Table 2).

Finally, a cross tabulation was made between areas of the physicians' practice and their view of the importance of office operations. More internists than general practitioners felt that office operations were important. On the other hand more general practitioners than internists felt that office operations were extremely important. On average, fifty-nine percent of the physicians felt that office operations were important. Essentially, area of practice did not differ significantly when compared to the gender of the physicians as a factor of the physicians' views of a private medical practice.

Physicians' Characteristics and How They perform the management functions

The effective management are planning, organizing, Leading, and Controlling.

Planning

In reference to age group, a major finding is that the majority of physicians, that is, eighty-seven percent, spent five hours or less per week in planning their operations. When the chi square was employed, there was no statistically relationship between the age of the physicians and time spent planning office operations at the 10 percent level.

Organizing

With respect to age of the physicians, eighty one percent of physicians spent five hours or less per week organizing office operations. On average, seventy-five percent of the physicians spent five hours or less per week in organizing office operations. The chi square analysis indicated that the age of physicians did not affect to a statistically significant degree the physicians' view of time spent organizing office operations. The hypothesis that the physicians' age is independent of time spent on organizing office operations is therefore accepted.

Leading

In terms of age groups the majority of the physicians spent five hours or less in leading office operations. Physicians in the age groups (34-45) and (56-65) appeared to give more time to office operations. Sixty-five percent of the latter and sixty-three percent of the former felt stronger about leading office operations. On average, fifty-eight percent of the physicians spent five hours or less per week. The chi square analysis indicated that the time spent on leading office operations did not

vary by age of the physicians. The hypothesis that physicians' age is independent of the amount of time spent leading office operations was therefore accepted.

Controlling

The majority of physicians, regardless of the age group, spent five hours or less per week in controlling their operations. Moreover, the younger age group (36-45) and the older age group (56-65) appeared to spend a sizeable amount of time controlling operations. On average, sixty percent spent five hours or less per week in operations. The chi square analysis indicated that the time physicians spent controlling office operations did not vary by the age of the physicians. The hypothesis that age of the physicians is independent of controlling function therefore accepted.

Importance of Physicians' Characteristics and Their Opinion about the Efficiency of the Administrative Aspects of Office Operations

The analysis in this section presents the results of the physicians' view about the administrative aspects of office operations. Physicians were asked "which of the following best describes how you feel about the effectiveness and efficiency of the administrative aspects of your office operations?" The choice of responses was: (a) extremely satisfied, (b) Satisfied, and (c) would like to improve. Table 3 shows the physician's responses.

In reference to age group, a major finding is that the younger age group (36-45) and the middle age group (46-55) of the physicians agreed that they would like to see improvement. Sixty-eight percent of the former age group felt that they would like to see improvement compared to sixty-five percent of the middle age group. On average, fifty-five percent felt that they would like to see improvement. Thirty-nine percent felt they were satisfied.

Table 3. Frequency And Percentage Distribution of Physicians' View of The Administrative Aspects of Office Operations by Selected Characteristics.

OPINION OF ADMINISTRATIVE ASPECTS OF OFFICE OPERATIONS

AGE	EXTREMELY SATISFIED		SATISFIED		WOULD LIKE TO IMPROVE		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
26 - 35	0	0	3	33	6	67	9	
36 - 45	1	4	8	29	19	68	28	
46 - 55	0	0	8	35	15	65	23	
56 OR OVER	5	13	19	50	14	37	38	

TOTAL	6		38		54		98	
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AVERAGE		6%		39%		55%		100%
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2
X = 15.46
Level of Significance = .0507

SEX	EXTREMELY SATISFIED		SATISFIED		WOULD LIKE TO IMPROVE		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
MALE	5	8	28	44	31	48	64	
FEMALE	1	3	10	29	24	69	35	

Total	6		38		55		99	
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Average		6%		38%		56%		100%
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2
X = 3.93
Level of Significance = .1405

YEARS IN PRACTICE	EXTREMELY SATISFIED		SATISFIED		WOULD LIKE TO IMPROVE		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
1-4	1	7	4	27	10	67	15	
5-9	0	0	8	30	13	62	21	
10-14	0	0	7	32	15	68	22	
15-19	3	16	8	42	8	42	19	
20 AND OVER	2	10	11	52	9	43	21	
TOTAL	6		38		55		99	
AVERAGE	6%		38%		56%		100%	

2

X = 10.13

Level of Significance = .2562

AREA OF PRACTICE	EXTREMELY SATISFIED		SATISFIED		WOULD LIKE TO IMPROVE		TOTAL	
	N	PCT	N	PCT	N	PCT	N	PCT
GENERAL PRACTICE	2	6	14	38	20	56	36	
INTERNIST	3	5	22	38	33	57	58	
OTHER	1	25	1	25	2	50	4	
TOTAL	6		37		55		98	
AVERAGE	6%		38%		56%		100%	

2

X = 2.65

Level of Significance = .6175

The chi square analysis indicated that the administrative aspects of office operations was dependent on the physicians' age at the 5 percent level of significance.

To further probe the physicians' opinions, gender was cross tabulated by the administrative aspects of the office operations (Table 3). The chi square analysis indicated that the administrative aspects of office operations did not vary by gender. The majority of physicians indicated that they would like to see improvement regardless of sex. On average, fifty-six percent of the physicians felt that they would like to see improvement. Only thirty-eight percent were satisfied. This finding is consistent with the findings of the previous section though not to a statistically significant degree.

Years in practice was also cross tabulated by the administrative aspects of office operations. A major finding is that the majority of physicians felt that they would like to see the administrative aspects improved. On average, only six percent were extremely satisfied, thirty-eight percent were satisfied, fifty-six percent felt they need improvement. The chi square analysis indicated that the administrative aspects of office operations did not vary by years in practice. The results are shown in Table 3.

The last part of this section was related to the area of practice. When area of practice was cross tabulated, the findings were consistent in all respect to the previous section. The majority of physicians felt that improvement is necessary. On average, thirty-eight percent of the physicians were satisfied compared to fifty-six percent who desired improvement. Moreover, there was no statistically significant relationship between the area of practice and the administrative aspects of office operations at 10 percent level (Table 3).

Straight tabulations were done to determine how physicians' view the importance of office operations. A score of one was the most important while a score of eight was least important. The results are shown in Table 4.

Table 4: Frequency and Percentage Distribution of Administrative Problems Are Perceived by The Physicians In The Operations Of A Private Medical Practice.

	MOST IMPORTANT (RANKED #1)		LEAST IMPORTANT (RANKED #3)	
	N	PCT	N	PCT
	OBTAINING RELIABLE STAFF	30	35	8
MEETING FINANCIAL REQUIREMENTS	13	15	7	8
CONTROLLING COST	12	14	4	5
SUPERVISING AND DIRECTING STAFF	10	12	5	6
LACK OF TIME FOR OVERALL PLANNING	9	10	2	2
INADEQUATE USE OF TECHNOLOGY	5	6	10	12
EXERCISING FINANCIAL CONTROL	3	4	4	5
PUBLIC RELATIONS AND MARKETING THE PRACTICE	3	4	46	53
TOTAL	86	100%	86	100%

Respondents were presented with a list of management problems and asked to rate them on the basis of their importance in managing their practice. The majority of physicians, that is, thirty-five percent indicated that "Obtaining reliable staff" was their greatest problem from the standpoint of office operations. "Meeting financial requirements" and "Controlling cost" were the next most important areas; Fifteen and fourteen percent of the responses identified these areas. Their last problem was "Public relations and marketing the practice".

Summary of Findings

The management practices of private physicians and the characteristics of their operations were analysed. A chi square statistic and regression analysis were used to test the hypothesis that the performance of management functions by the private physicians with respect to each of the characteristics were independent of the physicians' operation of a private medical practice. The results of a chi square and regression analyses are shown in Table 5 and 6.

As shown in Table 5, only one of the hypotheses was rejected according to a chi square analysis. That is, the number of staff was not independent of management practices of the private physicians. For all the remaining of physicians; characteristics, the hypothesis of independence was accepted. In summary, management practices of private physicians appear to have no impact or effect on the operation of a private medical practice except in the area of the number of staff employed by the physicians.

TABLE 5. RESULTS OF CHI SQUARE TEST OF HYPOTHESIS THAT MANAGEMENT PRACTICES OF PRIVATE PHYSICIANS ARE INDEPENDENT OF PHYSICIANS' CHARACTERISTICS.

PHYSICIANS' CHARACTERISTICS	IMPORTANCE OF MANAGEMENT FUNCTIONS
AGE	ACCEPT
GENDER	ACCEPT
YEARS IN PRACTICE	ACCEPT
AREA OF PRACTICE	ACCEPT
NUMBER OF PATIENTS SERVED PER WEEK	ACCEPT
NUMBER OF STAFF	REJECT

Table 6 shows the result of the regression analysis in which tests of independence between the physicians' characteristics and the performance of management functions in the operation of a

private medical practice were conducted. Based on the regression results, all the hypotheses were accepted except in one instance, where the number of staff was dependent on the performance of management functions in the operation of private medical practice. This hypothesis was rejected.

The important conclusion reached from this study is that in all the combination of chi square statistics and regression, a large number of aspects of management practices have been tested. None of those aspects had any significant influence on the performance of a private medical practice. There was only one statistically significant finding that was worth nothing. (Table 6).

TABLE 6. RESULTS OF REGRESSION TEST OF HYPOTHESIS THAT MANAGEMENT PRACTICES OF PRIVATE PHYSICIANS ARE INDEPENDENT OF PHYSICIANS' CHARACTERISTICS.

PHYSICIANS' CHARACTERISTICS	IMPORTANCE OF MANAGEMENTFUNCTIONS
AGE	ACCEPT
GENDER	ACCEPT
YEARS IN PRACTICE	ACCEPT
AREA OF PRACTICE	ACCEPT
NUMBER OF PATIENTS SERVED PER WEEK	ACCEPT
NUMBER OF STAFF	REJECT

One thing that is clear according to regression analysis is that the larger the number of staff employed, the more time physician has to spend on leading the office operations of a private medical practice.

Secondly, the question one may ask is "Were there any statistically significant findings?" The answer is "Yes". Again, according to regression analysis, though not related to the major hypothesis was the impact of physicians' age and the administrative aspects of the office operations.

Thirdly, a chi square analysis suggested that there might be some influence between the number of patients served per week by the physician and their opinion about the objective of office operations; and, the number of patients served per week by the physician and the impact of improved management technology on operations.

A multiple regression analysis technique was used to determine more exactly the nature of the influence of the number of patients served per week as a function of improved management technology or the specific objective for office operations. According to regression analysis, the number of patients served per week did not differ by the improved management technology or the specific objective of physicians. The hypothesis of independence that management practice have no impact on the performance of a private medical practice was accepted.

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