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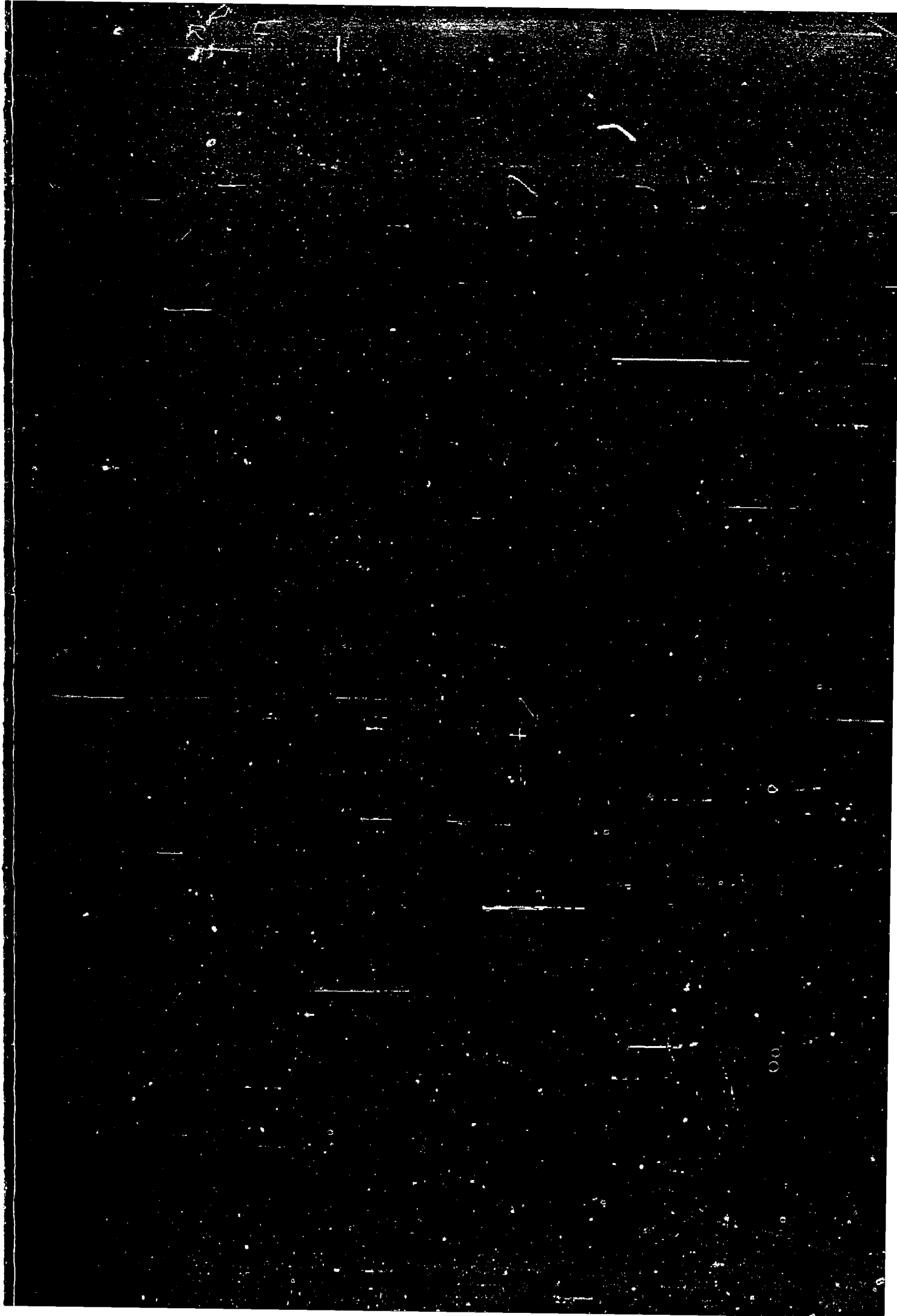
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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

IMPACT OF SPECIALIZATION ON THE
PHYSICIAN-PATIENT RELATIONSHIP

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

PAULA STAMPS

Oklahoma City, Oklahoma

1972

**IMPACT OF SPECIALIZATION ON THE
PHYSICIAN-PATIENT RELATIONSHIP**

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TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
 Chapter	
I. INTRODUCTION	1
II. ENVIRONMENTAL STRESSES OF THE ECOSYSTEM.	5
Changing Pattern of Diseases.	8
Specialization	10
Manpower Development	19
III. PARTICIPANTS IN THE ECOSYSTEM.	24
The Patient.	24
The Physician.	27
The Physician-Patient Relationship	31
IV. STATEMENT OF THE HYPOTHESES AND METHODS.	40
V. RESULTS.	50
VI. DISCUSSION OF THE RESULTS.	64
Hypothesis I	64
Hypothesis II.	89
Hypothesis III	97
VII. CONCLUSION	112
LIST OF REFERENCES	121
APPENDICES	127

LIST OF TABLES

Table	Page
1. Summary of Scores on the Thurstone Scale Measuring Satisfaction With the Physician-Patient Relationship By Type of Physician Utilized for Primary Care	52
2. Type of Physician Utilized for Primary Care By Scores on Thurstone Scale Measuring Satisfaction With the Physician-Patient Relationships: Chi Square Analysis . . .	54
3. Summary of Scores on the Thurstone Scale Measuring Satisfaction With Professional Competence of the Physician By Type of Physician Utilized for Primary Care	54
4. Type of Physician Utilized for Primary Care By Scores on Thurstone Scale Measuring Satisfaction With Professional Competence of the Physicians: Chi Square Analysis.	56
5. Summary of Scores on the Task Preference Scale By Type of Physician Utilized for Primary Care.	57
6. Type of Physician Utilized for Primary Care By Scores on Task Preference Scale: Chi Square Analysis.	58
7. Summary of Scores on the Characteristics Scale By Type of Physician Utilized for Primary Care.	59
8. Type of Physician Utilized for Primary Care By Scores on Characteristics Scale: Chi Square Analysis.	61
9. Summary of Scores on Perceived Medical Knowledge By Type of Physician Utilized for Primary Care.	62
10. Type of Physician Utilized for Primary Care By Scores on Perceived Medical Knowledge: Chi Square Analysis.	63
11. Item Analysis of the Thurstone Scale Measuring Satisfaction With Physician-Patient Relationship By Type of Physician Utilized for Primary Care.	66

LIST OF TABLES--Continued

Table	Page
12. Item Analysis of the Thurstone Scale Measuring Satisfaction With Professional Competence By Type of Physician Utilized for Primary Care	68
13. Type of Physician Utilized for Primary Care By Source of Emergency Care	69
14. Type of Physician Utilized for Primary Care By Source of Information or Advice.	70
15. Type of Physician Utilized for Primary Care By First Source Consulted When Sick.	70
16. Type of Physician Utilized for Primary Care By Consultation With Other Physicians.	71
17. Type of Physician Utilized for Primary Care By Method of Referral to Specialists.	72
18. Type of Physician Utilized for Primary Care By Area of Residence.	74
19. Type of Physician Utilized for Primary Care By Age	75
20. Age Distribution By Area of Residence.	76
21. Type of Physician Utilized for Primary Care By Social Class.	77
22. Social Class By Area of Residence.	78
23. Type of Physician Utilized for Primary Care By Health Rating	78
24. Age By Health Rating	79
25. Frequency of Physician Visits Within the Last Year By Health Rating (I).	80
26. Frequency of Physician Visits Within the Last Year By Health Rating (II)	80
27. Type of Physician Utilized for Primary Care By Frequency of Physician Visits Within the Last Year.	81
28. Age By Frequency of Physician Visits Within the Last Year	82

LIST OF TABLES--Continued

Table	Page
29. Household Size By Frequency of Physician Visits Within the Last Year.	83
30. Type of Physician Utilized for Primary Care By Household Size	84
31. Type of Physician Utilized for Primary Care By Quality Considered Most Important in a Physician	85
32. Type of Physician Utilized for Primary Care By Characteristics Considered in Selecting a Physician.	86
33. Characteristics Considered in Selecting a Physicians: Comparison of Results With Mechanic's Study (Mechanic, 1968).	88
34. Type of Physician Utilized for Primary Care by Tasks Considered Appropriate for a General Practitioner	91
35. Type of Physician Utilized for Primary Care By Characteristics Attributed to a General Practitioner	94
36. Type of Physician Utilized for Primary Care By Characteristics Attributed to That Physicians: Comparison With Cahal, 1963.	95
37. Item Analysis of Perceived Medical Knowledge Scale By Type of Physician Utilized for Primary Care	98
38. Item Analysis of the Perceived Medical Knowledge Scale Comparing Any Response to Don't Know By Type of Physician Utilized for Primary Care	101
39. Item Analysis of Perceived Medical Knowledge Showing Correct Answers By Type of Physician Utilized for Primary Care	102
40. Age By Scores on Perceived Medical Knowledge Scale	105
41. Type of Physician Utilized for Primary Care By Knowledge of Medical Problem	106
42. Type of Physician Utilized for Primary Care By Scores on Self-Diagnosis Scale	107
43. Item Analysis of the Self-Diagnosis Scale By Type of Physician Utilized for Primary Care	108

LIST OF TABLES--Continued

Table	Page
44. Type of Physician Utilized By Self-Diagnosis Score and Mean Score of Perceived Medical Knowledge.	109
45. Scores on Perceived Medical Knowledge Scale By Self- Diagnosis Scores	109
46. Self-Diagnosis Scores By Knowledge of Medical Problem. . . .	110
47. Self-Diagnosis Scores By Method of Referral to Physicians. .	110

IMPACT OF SPECIALIZATION ON THE PHYSICIAN-PATIENT RELATIONSHIP

CHAPTER I

INTRODUCTION

The intent of this dissertation is to evaluate an aspect of the ambulatory health care delivery system in an ecological context. Previous research in this area has been centered around specifics of the system, such as utilization of physician's services, compliance with physician's orders, and patient and physician satisfaction with the medical care received. Within this specific level, the unit of investigation has varied. The most common focus has been the physician himself. This has resulted in studies dealing with his medical education, analysis of the time spent with patients, and the kind of career choice he made in terms of specialization. A second common unit of investigation has been the disease that brings the physician and the patient together, and has involved the effect of the disease on medical treatment. A third focus, which is increasing now, deals with the patient's view of the medical care he receives. This has produced many studies dealing with health behavior, such as factors that influence the decision to seek a doctor's advice; patient satisfaction with medical care; and utilization of medical services.

While such research has contributed much to our knowledge of the

dynamics of the health care delivery system, still another level of investigation needs to be evaluated. This is a more generalized, abstract level dealing with the conceptualization of the health care system itself. In order to evaluate this conceptual understanding, the assumptions upon which it is based must be recognized and evaluated. One of the major assumptions that must be dealt with is the identity of the distributor and the type of his practice. The distributor that forms the crux of the ambulatory health care system is the single practicing physician with an M.D. degree. Despite trends toward increased utilization of manpower and increased numbers of group practice settings, medical care in the United States today evokes an image of a solo physician treating a sick patient. This physician was recently viewed as exclusively a Medical Doctor (M.D.), but now the degree expectations have changed to include those with a Doctor of Osteopathy (D.O.) degree also.

The type of practice the physician has determines his place in the organizational scheme of the delivery system. The general practitioner has traditionally been viewed as the "gatekeeper" of the entire delivery system. He has been conceptualized as the one who deals with patients first and who unlocks the secrets of the rest of the delivery system, if necessary. This conceptualization was based on the assumption that the patient was unable to deal with the entire health care delivery system.

However, the general practitioner has been regarded as more than the "gatekeeper." He also has been viewed as the family doctor, one to whom the entire family can turn when they need medical care or advice. The family doctor, as the name implies, may be viewed as almost a member of the family. The implication of his family membership has led to an

acceptance of a fundamental assumption of the model of the health care delivery system: in delivering medical services to patients, the interaction of the patient with his personal physician is considered a vital and important part of the healing process. Although the same three units of investigation are possible within this more generalized level, the focus of this dissertation will be on the patient's perceptions of this basic assumption.

The theoretical framework for investigating this assumption is that of ecological analysis. The ambulatory health care delivery system may be viewed as an ecosystem, which Odum defines as the basic fundamental unit of ecology. It includes both organisms (biotic communities) and the abiotic environmental factors (Odum, 1971). An important part of the theory of ecology is that each of these components influence the properties of the other and both are necessary for the maintenance of the ecosystem.

This personal relationship that is considered vital to quality medical care is examined closely in relation to some critical factors that can be termed environmental stresses of the ecosystem of health care. Three environmental factors that are analyzed are the changing pattern of disease, the phenomenon of specialization, and the trend toward increased manpower development. The participants or biotic component of the ecosystem, the patient, the physician, and their relationship, are analyzed in terms of their relationship with the environmental stresses since interrelationships and interactions are a fundamental area of concern for the discipline of ecology.

This study therefore deals with that aspect of the ambulatory health care delivery system which involves the physician-patient relation-

ship, evaluated from the patient's perception of this relationship. The influence of the environmental stresses, especially that of specialization, on this relationship is analyzed. The area of concern is on the generalized role relationships of the physician and the patient, rather than with one physician and one patient. Since this role relationship involves the basic assumption underlying the ambulatory health care delivery system, as noted before, inferences from this specific focus can be made back to the model of the delivery system.

Whenever the term physician is utilized, unless otherwise modified, it refers to a practitioner with the M.D. or D.O. degree. To restrict the discussion of the distributor in this manner is a recognized limitation, but is necessary for the scope of the discussion. The term patient in this dissertation is interchangeable with the term consumer. A consumer is not a patient at all times, but his attitudes toward the health care delivery system are deeply affected by his experience as an actual patient. In addition, there are other sociological and cultural factors that affect consumers' attitudes toward the delivery of health care and thus influence their actions as patients.

The review of the literature is lengthy and involves two levels, which are integrated in Chapters II and III. The first level is rather theoretical, involving cultural assumptions about patients, physicians, their relationship and other factors. This level provides the frame for the second level, which involves more specific statistical studies. The theoretical level is necessary to be able to understand the findings in the specific studies. Conversely, the specific studies provide clarification and correction of the theoretical level.

CHAPTER II

ENVIRONMENTAL STRESSES OF THE ECOSYSTEM

To characterize the health care delivery system in American society in anything less than a book is extremely difficult. However, of crucial importance is the examination of a few critical factors in an effort to provide a context for the individual patient, his physician, and their role relationships.

The first problem encountered is the distinction between health and illness. The World Health Organization has a time-honored definition of health as complete mental, physical and social well-being. Wylie discusses several concepts of disease and attempts to contrast them to the health situation (1970); Dubos has long talked about health and disease in terms of adaptive mechanisms (1965). Hinkle and Wolff have conducted a series of studies to indicate that disease is not a singular incident but is a state of the whole organism and is very much affected by the environment, both actual and perceived (1957,1958).

Since a definition of disease cannot be agreed upon, it is naive to assume that the profession that deals with the diagnosis and treatment of disease would be singular. Indeed the one phrase that most accurately describes the entire medical care delivery system is that of a pluralistic cottage industry. It is easiest to design a medical care industry to deal with disease as a singular phenomenon to be cured in an isolated context.

It is more difficult to design a system to care for a population so that they remain healthy by positive, preventive approaches. Our present emphasis lies somewhere in between these two. In trying to describe the domain of the field of medicine, Darley notes that medicine

. . . can be said to be the meeting ground of all the sciences and all of the arts. Medicine adds to and takes from all areas of human endeavor. Medicine is caring for patients, preventing disease, and protecting health. Medicine is anthropology, sociology, psychology, and economics. Medicine is language and history; it's religion, literature, art and drama. Medicine is involved with every aspect of human welfare, with the rich and poor and the health and medical problems that are peculiar to each . . . (1970, p. 495).

If this idealized concept of medicine could exist in reality, medicine would be the truly ecological discipline. However, Darley's conceptualization is in direct contrast to Davis' acknowledgement that one of the goals of medical school is to show a student how to have "some concern" for the patient as he performs his "professional tasks" (1968, p. 337). Or, as Esselstyn notes, "If we continue to take care of our patients, our patients will continue to take care of us" (1962, p. 129).

The profession of medicine lies at the center of our health care delivery system. Although the physician is described in more detail later, it is important to recognize here the general attitude of the public toward the medical profession. Esselstyn describes an attitude that is so well accepted it is almost a cliché: "From time immemorial, doctors have enjoyed a respected status in society. This has largely been based on their selflessness, sympathy, and willingness to be the servants of their patients and community" (1962, p. 128). The medical profession has largely been viewed, both historically and currently, as a service profession, not a profit-making one. Yet Degler (1959), Shyrock (1960), and Duffy (1960), among many others, note that historically this was never

true. They all point out that the physician was someone who took care of patients so the patients would take care of him.

In its idealized form, the medical care system is one in which every family would have a primary physician, who is the first contact for the family into the system. The primary physician's function is to provide continuous care for the entire family, to arrange for consultations with specialists if needed, to provide advice and information, to deal with preventive health measures the family needs, and to act as a general health counselor. Conceptually, the general practitioner and, more recently, the family practice specialty has trained physicians to fit this role.

An array of institutions and ancillary health professionals surround the primary physician. These include hospitals of various sorts, specialized clinics, various long-term facilities, public health professionals, and an ever-increasing variety of paramedical professionals.

This medical setting is threatened by turmoil today. Consumers and some health professionals decry decreasing quality, maldistribution and shortage of physicians, lack of adequate coverage by third-party mechanisms, and increasing costs. Mounting evidence shows the prevailing pattern of ambulatory care by private individual physicians is extravagant and inefficient. This evidence has resulted in experiments with various types of group practice, insurance policies, and some specific adjustment of the identity of the distributor (Lewis & Resnik, 1967). Many other factors add to the turmoil within the health field today--the political awareness of National Health Insurance and increasing demands of the consumer are but two issues confronting medicine. These developments have also directly affected the physician-patient relationship.

Three environmental stresses that might be termed critical factors

have a significant effect on the medical system as a whole and especially upon the physician-patient relationship. These three factors are: the changing pattern of disease, the phenomenon of specialization, and the trend toward manpower development. They will be discussed in detail below.

The Changing Pattern of Disease

Disease trends in developed and developing countries differ markedly, with developed countries experiencing a greater proportion of chronic diseases than underdeveloped ones (Hilleboe, 1967). This is not to say that acute diseases are lacking in developed countries: the proportion of chronic diseases has increased, however. This increased proportion of chronic diseases is a physical environmental stress. The increased proportion arose from an interaction of several complex factors: one of these is the success of medical knowledge. Another is the public health component of the ecosystem, which has concentrated on controlling infectious arthropod-borne diseases, water and food borne diseases and other acute illness. Other important environmental factors are nutritional habits and man's changing life style. There is also some indication that there exists a periodic fluctuation in history that may be a property of any given disease (Dubos, 1965).

This increased proportion of chronic disease has placed stresses on the medical care system. In the era of acute diseases, physician intervention often meant a life saved. The physician's action could be directly linked to the saving of a life. He may have spent long hours with the patient, perhaps even in his home, since the acutely ill person was often too sick to be able to go to the physician.

Today the physician also spends a great deal of time, although in shorter segments, with the chronically ill; but with notably less success than in dealing with acute diseases. For complex, multiple-etiology chronic diseases, there are no easy cures--in fact there are no cures at all. The chronically ill patient's contact with the physician is less positive--there are no miracles, only more medicine to take. In addition, much more is expected of the physician today than thirty years ago when medical science was more limited, and the consumer less demanding.

The role of the physician is thus changed from healer to that of advisor. With this change, the patient's role is also altered. In acute diseases, which are usually self-limiting, the patient has little or no choice but to follow the advice of the physician. With chronic diseases, however, the patient must be viewed as a partner in therapy. An editorial in New Medical Materia expresses this alteration as follows:

It is largely the public that decides almost all forms of treatment, except for those comparatively rare instances where an individual may be treated without his consent or even against his desires. In this age of chronic diseases, where necessary treatment may be long and strenuous, the patient must learn the whys and wherefores of medicine if he is to cooperate with the physician. I do not suggest that the lay person, whether we think of him as a patient or as a senator voting on health matters, be given a full medical education. But basic concepts must be explained to him somehow. He must be a part of the spectrum of medical communication, for he has extraordinary power to say what is or is not being done concerning his care (1963, p. 19).

In addition to problems relating to the physician-patient relationship, chronic diseases create a problem in the behavior of a person as he decides to become a patient. In a 1960 study Apple notes how people define illness. She concludes that for middle class Americans, to be ill means to have an ailment of recent origin which interferes with one's activities. She adds that this seems to be an example of a cultural lag. Surely this attitude is appropriate to an earlier era when the main health

problem was acute infectious diseases, whose symptoms were obvious and often life-threatening. Chronic diseases, on the other hand, have a slow and insidious onset, with symptoms that tend to persist over time, but which may not limit activity (Apple, 1960, p. 225). In addition, Stoeckle quotes several community surveys that consistently report episodes of chronic illness in a public who think themselves well. In one study, 92 per cent of a "healthy" population had a disease amenable to diagnosis and treatment (Stoeckle, et al., 1963).

The effect of chronic disease on the physician-patient relationship, then, is to place more responsibility on the patient. He decides when it is appropriate for him to see a physician; and, after contacting him, the patient decides whether or not to follow his advice. Both decisions are no doubt easier to make when the person has an acute disease with clearly defined symptoms than when he is suffering from a chronic disease.

Specialization

One of the most important factors influencing the physician-patient relationship and the health care industry in general is that of specialization, which is a social environmental stress. Chronic disease and specialization have an historic relationship in that the increased prevalence of chronic diseases is one of the factors responsible for increasing specialization.

As Menke has emphasized, specialization is not new. In 1919, the American Medical Association policy-making body, the House of Delegates, recognized a specialist as conceptually and functionally different from a general practitioner (Menke, 1970, p. 944). In addition, Stevens

gives a thorough and detailed treatment of the history of specialization in her book American Medicine and the Public Interest (1971).

However, general practitioners have been declining more and more rapidly in recent years, both proportionally and absolutely. In 1928, 74 per cent of physicians indicated they were engaged in general practice; the remaining 26 per cent were almost equally divided between those who regarded themselves as full or part-time specialists (Menke, 1970, p. 944). White records the percentage of general practitioners in 1931 as 71 per cent and notes that in 1962, only 27 per cent of all physicians were general practitioners (1964, p. 333). Although the number of physicians increased 26 per cent between 1949 and 1962, general practitioners decreased 24 per cent (Menke, 1970, p. 944). In addition, Knowles adds the startling fact that one study indicated only 2 per cent of today's medical school graduates actually enter general practice (1969, p. 86).

Weiskotten (1960, p. 1080) has spent much time in evaluating the trends toward specialization, by analyzing medical school graduates from 1915 to 1950. His findings are noted below:

<u>Year Graduation</u>	<u>G.P.</u>	<u>G.P. with specialty</u>	<u>Specialty only</u>
1915	22.7%	36.0%	41.3%
1920	24.0%	40.7%	35.3%
1925	25.2%	40.7%	34.1%
1930	31.6%	38.0%	30.4%
1935	23.2%	20.5%	56.3%
1940	21.1%	14.1%	64.8%
1945	19.1%	5.9%	75.0%
1950	24.6%	7.3%	68.1%

He also notes that the decision to specialize is made either while in medical school (34.4 per cent) or during the internship (35.8 per cent) (Weiskotten, 1960, p. 1080). This finding is consistent with the more recent studies of Wasserman (1969) and Haggerty (1963). Thus, medical

schools, whose job it is to provide the student not only with medical knowledge but also with his role model, are largely responsible for the lack of general practitioners.

Haggerty notes several reasons for this increased specialization at the medical school level. He cites the problem of increasing amounts of knowledge required for the general practitioner. However, he believes that one of the most important factors is the lack of general practitioners on the faculty of medical schools to provide a role model for students. Therefore, medical schools do not demonstrate what the family physician can do better than the specialist. The general practitioner is always perceived as "second best" (Haggerty, 1963).

In addition to these reasons, which are based in the educational system, Stevens notes some other societal reasons. She cites the defeat of the Wagner-Murray-Dingell bills in the 1940's as eliminating the possibility of public support of the general practitioner through a health service payment scheme. The creation of specialty boards and the lack of creation of a professional American Medical Association-connected board for general practice until later years caused even more professional confusion and dichotomy. In addition, during World War II, the wartime classifications of physicians put a premium on specialists (Stevens, 1971).

Added to these factors was the change in the state of the knowledge of medicine. Specialization is popularly regarded as an outgrowth of the extension of medical knowledge combined with the physician's desire to become proficient in a special field. However, the concept of specialization in order to deal with increasing amounts of knowledge was superimposed on a profession that was designed to produce one general physician. From the time of the Flexner report of 1910 until the 1960's,

generalism was conceived as a foundation on which specialist experience would be built. As late as 1940, the Commission on Graduate Education reinforced this concept of the general practitioner by suggesting: "There should be no fundamental difference between the internship offered to the man going into general practice and the internship for the man who plans to take a residency in order to prepare himself for one of the specialties." The implication of this theory on medical education that a physician was first a generalist then a specialist was that it became accepted that the generalist required less training and was thus implicitly less important and less competent than the specialist. Medical students in the late 1940's increasingly obtained the impression that general practice was "what the specialists discarded." The dilemma of the general practitioner, then, should not be viewed as merely a question of the changing content of his practice, or of general increase of knowledge in medicine; it is also a social process and part of the ever present political processes of professionalization (Stevens, 1971, p. 295).

Gilbert offers another view of the fallacy involved in regarding specialization as merely an outgrowth of increasing medical knowledge:

A few years ago the education of a physician as a junior scientist may have been defended on the grounds that we had to pound all of those facts into his head in a very short period of time. The human brain was regarded as a poorly designed structure incapable of storing all the medical facts appearing in the tons of medical journals published every year. We fragmented medicine into specialties and subspecialties largely because of what many regarded as a gross error in brain design. The truth is that the human brain is quite a remarkable structure, clever enough to provide its owner with books, and more recently computers, as storehouses of knowledge. The physician then is freed to function as a scientific humanist to creatively analyze the biological maladjustment responsible for his patient's disease. The physician must be prepared to combat the cause of disease whether it lies in his patient's environment, his society, or within himself (Gilbert, 1969, p. 358).

Despite these insights, specialization has increased, perhaps not

only because of increasing knowledge and professionalization, but also because of the problems of delivery of health care; the problems of medical school curriculum; and the problems involved in practicing in an urbanized, over-populated, technological society.

In addition to the factors noted above, Wasserman et al. have examined personality features of medical students that seem to predispose a student toward a medical speciality. They note that students rated as "isolate" made their work choices within a narrower range, and preferred technique-oriented specialties to person-oriented ones, while those rated as non-isolates tended to choose a medical area with more personal contact with patients. He observes that this seems to be a function of the medical school process: the percentage of freshman students choosing general practice was 42 per cent. This dropped to 19 per cent by the senior year (Wasserman et al., 1969).

The effect of specialization on the field of medicine is mainly that of compartmentalization. Specialization also encourages within-profession conflicts, since the boundaries between specialties are not clear. Specialization particularly affects the general practitioner in this regard, for he is supposedly responsible for all areas of a person, which conflicts with the individual specialists' area. The general practitioner is also caught in what Henke refers to as a "quality trap", which results from physicians setting their own standards unreasonably high to restrict general practitioners in as many ways as possible (1970, p. 945). In addition, the hospital connections of a general practitioner often pose a problem, especially in view of the specialists on the staff who can find no place for the general practitioner.

Specialization also creates problems for the physician-patient

relationship. With the growth of specialization, the traditional physician-patient relationship is severely modified. The maintenance of the relationship is made difficult not only because the patient is segmented by specialization but also by virtue of the specialist's increasing difficulty in assuming continuing responsibility for treating the whole patient, which is regarded as essential to the traditional physician-patient relationship. In addition, Menke has pointed out that in practice the specialist does not establish the close relationship with the patient that characterizes the ideal of the family physician (1970, p. 945). One reason for this might be Wasserman's observation that the specialist may have chosen his field because he does not want to work closely with his patients (1969).

In a dissenting opinion on this subject, Hudson says that a personal physician is not necessarily a kind of practice, but is a concept of a type of relationship between a patient and a physician. He concludes however, that it is more difficult but not impossible, for a specialist to develop an empathetic relationship with the patient. He adds that it is unfortunate that the patient should feel that he faces the alternative of choosing between an "understanding" doctor and a competent one. He holds further that medical schools will supply whatever type of physician the public demands and utilizes (Hudson, 1968).

The problem may not lie in specialization as such, but rather in two other factors. One is the way the public utilizes the current system of medical care; the second is the general philosophical problem of specialists versus generalists.

The system as it is presently designed, or as it presently operates, provides an initial point of contact for patients by means of a

general practitioner. The general practitioner is conceptualized as the gatekeeper to the complexities of the rest of the medical care system. However, White quotes a study of physicians' practices that indicates the bulk of a specialist's practice is self-referred; that is, the patient has decided himself to consult a specialist. Patients referred from other physicians constitute only 12 per cent of pediatricians' practices and 23 per cent of internists'. The patient is therefore choosing to "by-pass" the gatekeeper and is deciding not only that he needs a specialist, but he is also deciding which type he needs. White further substantiates this by quoting another study which showed that the type of practice of a general practitioner and a specialist were very similar. The specialists (internists and pediatricians) were spending at least half of their time being the primary physician for patients (White, 1964). Blanchard suggests that physicians other than general practitioners may function as the primary physician for a family, since they seem to be taking over many of the general practitioner's functions. He further suggests that the term "specialist" be changed to be more in line with his function and suggests they be known as "consultants." The consultant is problem-oriented and does not place himself above the general practitioner in skills, but next to him. The general practitioner is person-oriented and is responsible for coordinating the care of a family. As a result of this role, the family physician develops a continuing relationship with the patient. Blanchard stresses that the patient needs both types of physicians for quality care (Blanchard, 1970, p. 1206).

There is inconclusive data on the number of people who utilize specialists as their primary physician. The following is known: there are fewer general practitioners (27 per cent, as noted before) than spe-

cialists; and the practices of specialists are becoming more self-referred, primary care. From these facts, it would seem a likely inference that more and more people are turning to specialists as their primary physician. A 1963 study done by National Opinion Research Corporation, however, indicates that only 14 per cent of the sample selected specialists for their primary care (Cahal, 1963). Unfortunately, no information was given as to the sample size or income level. This may be a phenomenon of the middle and upper classes that are better able to afford specialist care. Another study examined three-generation families and found that of those who had a physician as a source of care, most of them utilized a general practitioner. However, the youngest generation was much more likely to have multiple physicians than their parents or grandparents (Litman, 1971).

The second level of influence is the philosophical argument about the merits of a generalist versus a specialist. This debate is occurring to some degree in almost every other field, so it is of no surprise that it is also present in medicine. Specialization may be viewed as equivalent to industry's division of labor. Unfortunately no attempt has been made to develop persons who are capable of integrating these specialty areas. McAuley quotes Pellegrino in an eloquent statement about the need for integration between specialty areas:

Though we may deprecate specialization for the problems it may introduce, its growth is essential to the continued practice of medicine. To the extent that it does flourish, there is concomitant need for integration, interpretation and generalization. The values, systems, methods and organization of medical education and practice have adapted well to needs of society for training specialists, but have left largely unsolved the corollary development of equal stature for the integrating function of medicine. We now face the task of interweaving the benefits of specialization into general medical care. Neither the internist, nor the general practitioner, as presently constituted, are

equipped to perform optimally this integrating function. A new kind of generalist is required, not just the introduction of general practice into medical education (McAuley, 1967, p. 1037).

Questions raised about the implications of the above quotation and the alternatives available to us are complex and difficult to solve. One alternative is to disregard the concept of the family physician and embrace mechanized, dehumanized medicine. An alternative advocated mainly by non-physicians is to substitute someone else as the first contact for the family into the medical care system. A recent move in medicine is implementing a third alternative, the creation of a new type of generalist. In early 1969 the American Board of Family Practice was established, and medicine's twentieth specialty was founded (Willard, 1966). Many view this as an effort to upgrade the non-specialty of general practice; others insist it is a completely different concept and could serve as an alternative to the problems of specialization.

One other alternative must be discussed, especially in light of Hudson's view that medical schools produce the types of physicians people want and utilize. This alternative recognizes the possibility that the warm traditional relationship between the family physician and the patient may no longer be desired. It may be that the patient views competency and warmth as mutually incompatible and preferring competency to warmth, seeks a specialist to care for him. This is supported by the 1963 survey conducted by National Opinion Research Corporation to determine the image of the general practitioner. They found that people are primarily interested in the competency of their physician, not in his relationship to his patients (Cahal, 1963).

The contention that patients would feel lost without a primary physician serving as a health coordinator may not be felt by the patient

as much as by the health professional (Elkinton, 1969; Murray, 1956). The cliché "when I am well I want a general practitioner and when I am sick I want the best specialist" (JAMA Editorial, 1970, p. 862) may provide a clue to a new understanding of patients' attitudes and utilization of general practitioners and specialists.

The effect of the phenomenon of specialization on the physician-patient relationship is staggering. Specialization alters the role of both the physician and the patient, dividing both of them into various segments of interest. Specialization would thus seem to contradict the importance of the warm personal physician-patient relationship.

Manpower Development

Determination of the need for various health personnel is the issue at the heart of the whole manpower development area. Determination of need is never easy, but when clear indicators are absent, the task is even more difficult. Indicators presently used commonly involve some ideal determination of numbers or a comparison of number of health professionals to a population base. However, as Knowles has suggested, the question of manpower is much more complex than the number of physicians per population. It is an issue that involves the type of physician; analysis of social, psychological, cultural, and economic reasons for entry or lack of it into a certain field; entry of women and racial minority groups, training capacity and cost of the medical education system; the productivity of physicians, and the type of utilization by the patient (Knowles, 1969).

One central issue is that of the need for physicians. Fahs proposes a model for conceptually viewing the manpower problem as one of maldistribution of physicians (1971); Somers, however, makes a strong case

for an actual numerical shortage of physicians (1971, p. 6). Knowles observes that the increase in active physicians between 1955 and 1965 was 22 per cent, which exceeded a 17 per cent growth in population. He also notes that productivity of physicians increased even more. However, the demand for physician's services have also increased, due to population growth, age-sex distribution, education, and increasing demand for medical care (Knowles, 1969, p. 85).

Physicians are not the only health personnel showing an increase. Employment in the health professions rose 50.5 per cent between 1950 and 1960 as compared with 11.4 per cent increase in the total labor force and a total population increase of 18.5 per cent. In 1950, of the total health manpower pool, 13.48 per cent were physicians (including M.D.'s and D.O.'s). In 1960 this had dropped to 10.93 per cent and it is estimated that in 1970 the percentage of physicians will drop to 8.14 per cent (Knowles, 1969, p. 86). The same trends have been noted by Kissick (1968) and James (1967).

The increase in non-physician manpower is not limited to currently established categories. "Health Careers Guidebook" lists over 200 careers in its report, the majority of which have been created since World War II (Kissick, 1968, p. 24). In 1968, Hale noted the existence of 73 different clearly-defined paramedical job specialties within a hospital setting (Hale, 1968, p. 87).

Thus, the manpower issue is really an extension of the phenomenon of specialization. These paramedical professionals have clearly-designated jobs, many of which are intended to take some routine responsibilities away from physicians, enabling the physician to see more patients and deliver higher quality of care to his patients. This recognizes the fact

that the physician performs many tasks of a routine nature that lesser trained personnel could do effectively and at less cost. This again is a reiteration of the division of labor concept, where each man's training matches his job function. Manpower specialization has led to the development of the team approach to medicine, which is based on the supposition that comprehensive, continuing care is best delivered by a team. In all cases, however, the physician has retained ultimate responsibility for the patient and for the allied health professionals.

Kissick has noted that there are alternative ways to avoid wasting manpower besides creating endless job categories. He notes the importance of matching training with the level of skill required, of matching technological skills to jobs, and creating more opportunities for career mobility (Kissick, 1968, p. 29).

The other function to be considered is the effect of manpower development upon the patient, both in the area of technically competent care and in the area of the physician-patient relationship. Many studies conclude that patients are satisfied with the care they received from allied health professionals. There is even some indication that the care they receive may be superior, especially in the area of chronic disease management. Lewis and Resnik have experimented with nurse-clinics for those with chronic diseases. Patient acceptance was high and the quality of care, as evaluated by physicians, was also very high. Nurses were even given the responsibility to change the medical regimen of the patient when necessary, within certain limits. Lewis and Resnik suggest that the chronically ill need more time than the physician has to give and yet do not need the skills of a physician for most of their care. They found statistically significant differences in outcome in terms of

reduction of disability and relative decreases in discomfort and dissatisfaction (Lewis & Resnik, 1967; Lewis, et al., 1969). Runyan has also worked with nurses treating the chronically ill and reports positive outcomes, not only in terms of patient reaction, but also in terms of cost and efficiency (1970, p. 476). Rogers has described a largely non-physician delivery system to treat a low-income group (1968); and Fink, in describing utilization of a nurse as a management specialist for pediatric care, reports high patient satisfaction and higher quality care delivered to those who had the nurse rather than the physician as their manager (1969). Steiger and Yates describe a method of organization of patient care determined by the patient's needs. They recognize four types of care needed by patients and then note what types of manpower might best be able to meet the patient's needs. They found that 90 per cent of new patients need technological procedures that could be applied by a nurse. However, only one out of five returning patients require this type of care. They suggest a team approach based on the needs of the patient matched to the skills of a provider (Steiger & Yates, 1969).

Coye and Hansen have explored tasks that physicians would allow paramedical professionals to do. The results of this survey were startling in that physicians in this sample were opposed to personnel without a full medical education giving routine anesthetics, carrying out uncomplicated deliveries, performing portions of the physical exam, doing many emergency room procedures, and executing other fairly technical jobs. In contrast, however, they were in favor of allowing this person to take a medical history, which, the authors note, has long been regarded by medical educators as one of the most demanding aspects of the physician's job and considerably more important than the physical exam in establishing

a diagnosis and a plan for treatment (Coye & Hansen, 1969).

Manpower development will probably remain a significant interest for many years, as this seems to be regarded as an acceptable method of reducing costs for delivery of health care. The studies noted above imply that patient acceptance of various paramedical professionals is greater than physician acceptance. The implication of this for the physician-patient relationship may be that the patient needs to relate to someone who is sympathetic and competent within a given area, but who is not necessarily a physician. Or it may be that the patient relates not to just one point of contact, but to many personnel within the system. In light of increasing specialization and manpower trends, a more accurate representation of the physician-patient relationship might be a team-patient relationship. Specialization and manpower development therefore affect the physician-patient relationship by altering who the patient relates to: rather than a single physician, he relates to several physicians or to a team of health care professionals. In addition, the patient relates to them, not as a whole person, but as a series of separate systems.

As with specialization, the ultimate impact of manpower development is to undermine the traditional physician-patient relationship which is regarded as a close personal relationship with one physician.

CHAPTER III

THE PARTICIPANTS IN THE ECOSYSTEM

The Patient

The medical care professional, symbolized by the physician, generally views the patient as one who is sick and seeks relief from his illness. Most patterns of medical care organizations are delivered in a patient-centered model--one that arranges all its services around the sick patient.

Many articles have been written by physicians on what the patient really needs (JAMA Editorial, 1969, p. 788). Other articles concern problems with the patient--"Whatever Became of the Old-Fashioned Patient?" is not only the title of an article by a physician (Hudson, 1968); but is also the cry of many physicians today.

The patient-centered model of care, as well as the bemoaning of the "old-fashioned patient," view the person as a patient only after he is within the medical care system. However, other studies by more sociologically oriented writers indicate that to view a person as a patient once he is in contact with the medical care system is to view him as the tip of an iceberg. The appearance of the person in the physician's office is the climax of much health behavior that has preceded that appearance and is the beginning of the behavior that will follow the contact with the physician.

The patient is viewed by White as a more relevant primary unit of observation than the disease, the visit to the physician, or the possible admission to the hospital (1961).

Increasingly, the literature contains studies designed to verify the process by which persons perceive some disturbance in their sense of well-being, decide to seek care and from which source, and decide whether or not to cooperate with their health advisor. Available data, which are summarized below, indicate that patients control the decision-making process with respect not only to seeking help but also to accepting and utilizing medical care.

One of the most widely quoted models of patient behavior is that of Talcott Parsons, who describes four specific features of the sick person. The first state is that the person recognizes his incapacity as beyond his powers to overcome. This enables him to escape responsibility for his state and obliges him to seek therapeutic help. The second feature is that the incapacity exempts the person from his normal social roles. The third is that, although illness is legitimate, it is undesirable, and the patient must desire to get well and cooperate with therapy. Parson's last feature is that the sick person has an obligation to seek competent help and to cooperate with this help in an effort to get well and resume his normal role relationships (Parsons in Jaco, 1972, p. 107).

Significant as these criteria are, they neglect what may be the most crucial stage--the perception of the problem as an incapacity. In starting with the person having already acknowledged the existence of the incapacity, the whole area of the process of perception as related to the person and his family and cultural situation is ignored. The problem of defining disease and health on an abstract level are also encountered on

an individual level. After extensive documentation, White found that in an average month, for every 1000 adults, 750 experienced what they recognize and recall as an episode of illness or injury. Of these, only 250 consulted a physician (White, 1961, p. 890). DiCicco found that the concept of health in an older population was equated with ability to be active (1958). The problem of definition of disease, as Apple reported, has important implications for the physician-patient relationship, especially in view of the increasing proportion of chronic disease (Apple, 1960). This personal perception of disease, regardless of whether it is objectively accurate, will help determine the person's behavior. Mechanic has listed some factors that influence a person's perception of a problem as incapacitating. These include the amount and recurrence of the problem; the visibility of the aberrance; the extent to which the person's normal social roles are disrupted; the cultural tolerance for deviant indications; the cultural assumptions made about aberrations; the availability of treatment; and the social characteristics of the person (Mechanic, 1966, p. 242). Bersky fills in some gaps by noting that perception of a problem as an illness depends not only on the availability of treatment, but also on the attitudes of the person toward that treatment, including his belief in the personal benefits to be derived from examination (Borsky, 1966, p. 242).

Behavior is constrained by the expectations of the social groups that are significant for the person. Socio-economic status seems to constitute one of the most important sources of differences of behavior in social and medical areas. Almost all the studies that have been done show that upper and lower socioeconomic groups have different values and norms and vary in their utilization of health services and in their health

status (Suchman, 1965; Koos, 1954; Simmons, in Jaco, 1958, pp. 107-113).

Once the person has perceived his disturbance to be a health problem and decides to seek care outside his own resources, the decision as to what kind of care he seeks must be made. The health advisor may be a neighbor, a pharmacist, a family member, an M.D., a D.O., a chiropractor, or any other health advisor available to the person. Koos' important conclusion in evaluating the source of care the patient sought was that patients often sought those who were closest to them sociologically, rather than on the basis of medical need (Koos, 1954).

At this point the patient, having decided to seek help and from whom, then decides whether to follow the advice of the advisor. Again, a whole range of factors exist that influence the person's decision-making process in this area. Satisfaction with care and attitudes toward physicians have been cited (Caplan, 1966; Reader, 1957); recently however, the amount of self-diagnosis has been observed as important in influencing the decision to follow medical advice (New Medical Materia, 1963, p. 18).

From the above it is obvious that the problem becomes one of determining the relative importance of factors that influence health behavior. Certainly the factors listed above require more detail, but they do provide insight into a conflict--the patient's view of the patient and the physician's view of the patient may be seriously different. This has been documented quite well by the many studies quoted by Stoeckle in his literature review (1963).

The Physician

As is obvious from the preceding discussion of the definition of the patient, that identity is not just "someone who is sick." Likewise,

the problem of defining the physician is also not solved by saying that he is "someone who takes care of the sick."

The American physician is generally a male who has had four years of undergraduate work, commonly in a program that emphasizes science; four years of graduate medical work; one year of internship; and from two to six years of residency. In addition, he has taken the Hippocratic Oath and is licensed to practice in one or more states.

This definition describes only the average educational experience of the M.D. But this educational experience is a strong influence on the physician, since the studies noted previously have shown that the major decisions pertaining to the future choice of practice are made while in medical school. It is also during medical school that students are initiated into the physician's role as its values and related behavior become explicit to him. Davis sums up the role expectation communicated to medical students as one in which a physician is expected to show "some concern" for his patient while he performs his professional tasks. He should take a patient's history, discuss the present illness, give the patient a physical exam, and later, on the basis of his information, present some diagnosis and prescription, provide some information and explanation, and give the patient a certain amount of reassurance (David, 1968, p. 337).

Menke adds further considerations to the concept of medical schools transferring the role model of physicians to students. He remarks that in patient contact in medical school there is no reason to consider the financial status of the patient, to secure a fee or even to determine whether the service is desired by the patient. This is contrasted with the previous method of training by apprenticeship where a student went

with a physician from house to house learning not only medical information, but also methods of private practice simultaneously (Menke, 1971, p. 59). The question of the relevance of medical school curriculum to medical practice is raised again by White, who challenges the very basis of clinical programs:

For many years it was an unchallenged assumption that physicians always knew what was best for the people's health. Whatever the origins of this authoritarian assumption, it presumably was transmitted by the medical schools as part of the "image" of physicians. Serious questions can be raised about the nature of the average medical student's experience, and perhaps that of some of his clinical teachers, with the substantive problems of health and disease in the community. In general, this experience must be both limited and unusually biased if, in a month only 0.0013 of the "sick" adults or 0.004 of the patients in a community are referred to university medical centers. The size of the sample is of much less importance than the fact that, on the average, it is pre-selected twice. Under such circumstances, it would be difficult, if not impossible, for those at medical centers, without special efforts, to obtain valid impressions of the over-all health problems of the community. Medical, nursing, and other students of the health profession cannot fail to receive unrealistic impressions of medicine's task in contemporary Western society . . . (White, 1961, p. 891).

The function of the physician is much more than that of taking care of the sick. Parrish indicates that in the office of a general practitioner 47 per cent of the time is spent in diagnosing and treating. The rest of the time is divided between dispensing health information (17.2 per cent), administration duties (16.3 per cent), preventive medicine (10.9 per cent), and personal business (8.6 per cent) (Parrish, et al., 1967, p. 897). Eimerl reinforces this with a conclusion to his British study of the responsibilities of physicians:

Few outside the profession realize the degree of pressure the work has: With no one to delegate to and no sharing of responsibility, the doctor has to make decisions every few minutes of the working day; these decisions are often based on less than complete evidence and thus are the hardest to make for correctness. Often the decision is to temporize, to wait and watch—which can be in effect a decision to do nothing. The practitioner will have seen many hundreds of patients before the next consultation with that particular

patient and often the link with the earlier consultation is only through fallible memory. No executive or manager in business has to make so many decisions--some of them of considerable and even potentially life-saving importance to the individual patient--on so little evidence or in so short of time (Eimerl, 1966, p. 1552).

This sort of pressure is applied on physicians by patients and by larger society. According to Parsons, the person may not be held responsible for his being sick, but he is nonetheless deviant and the physician may therefore be viewed as a social control for deviancy. On an individual level, as well as on a societal level, the physician is placed in a service position rather than in a position of being a profit-making entrepreneur. No one else is thanked so profusely for services paid for than the physician. His function is close to the emotions of anyone who has had occasion to be a patient.

The professional status of the physician is very high. In 1963, National Opinion Research Corporation replicated a 1947 study that ranked ninety professions. In both studies, the physician was ranked second only to a U.S. Supreme Court justice. The score assigned to the physician was 93, with the next closest score being 86 for a nuclear physicist (Hodge, et al., 1964).

The physician in both title and function has high prestige in our society, despite current criticism. Physicians are coming under fire as too interested in money, incompetently trained, lacking interest in patients, and too interested in their own professional standing (Remsburg, 1970; Schwartz, 1971). The public views this as a recent phenomenon, but the medical historians previously cited reveal the same criticisms seventy years ago (Degler, 1959; Duffy, 1957).

The physician, then, is in a position of great power today, even though he is being subjected to much criticism. In one study reported by

Mumford, people who gave physicians the highest prestige rating also tended to express the most criticism (1967, p. 1507). Patients expect many differing roles from physicians. In a fairly comprehensive review of the literature, Stoeckle notes that the physician is alternately perceived as a medical expert; a technician, much like a plumber; an intermediary between other family members; or a person in which to confide (Stoeckle, 1963).

This ambiguity results partly from role expectations the public assigns the physician, and partly from the professional identification of the physician. To the majority of Americans seeking medical care, the physician is a health expert, one whose opinion is eagerly sought after and one who is paid for his knowledge.

However, Iago Galdston, writing in 1954 notes these changes in the physician's role that are certainly applicable today:

In the exercise of curative medicine the physician is being increasingly a middle man between the patient and the diagnostic laboratory (sometimes operated by the so-called specialists) on the one hand, and the pharmaceutical houses on the other--reflect on what changes have taken place in the task of diagnosing and treating such disorders as pulmonary tuberculosis, pneumonia, and the venereal diseases. It is not an exaggeration to affirm that it is not the physician but the laboratory that makes the diagnosis; it is the pharmaceutical house that provides the treatment (Galdston, 1954).

Physician-Patient Relationship

To describe the interaction of the physician and the patient is infinitely more complex than to characterize either of the two roles alone. The physician and the patient are each respectively part of biotic communities that influence their behavior. Their relationship is the result of the interaction of these two biotic communities. A relationship is an abstract concept which is often viewed as a "thing" or a "function."

Physicians often write or comment that the physician's relationship with his patient "per se" helps the patient. This gives the impression that the relationship is a thing that works much like vitamins. Viewing the relationship as a function is revealed by the attitude that the relationship depends on what the physician thinks, feels, or does (Szasz, 1956). The patient and physician, however, are interacting, dynamic components that make up a social system. The patient brings to the setting what might be termed his community of influence, which includes his individual background; his life style; his beliefs about medicine, doctors and illness; and a myriad of other complex factors. To the relationship the physician also brings his community of influence which not only includes psycho-socio-cultural factors, but also involves his professional and educational experiences. The patient is an extension of his community and the physician may be said to be largely an extension of medical school.

Many conflicts exist between the world of the patient and the world of the physician. Stoeckle cites several studies which show the extreme differences in how patients view their symptoms, and what they expect from their contact with physicians (1963). While there is much idealization in medical school (where the role ideal is communicated) on the physician side of the relationship, a few studies show some discrepancies in this role understanding. For example, the perceptions of the fourth year medical student of the attributes that make a good physician placed professional qualities far above concern with the physician-patient interaction or personal qualities (Davis, 1968, p. 338). This is in contrast to the attitude communicated by the following quote, which is but one of many in a similar vein:

Of course, insofar as American medicine is still a cottage industry based on a one-to-one relation between a family doctor and a patient, it has much to recommend it. Since most ailments are self-limiting, they can be handled adequately even by a "solo practitioner" . . . A family doctor--and there are still many of them around--gets to know his patients as human beings and is able to provide what is probably the most frequent positive outcome of the patient-physician encounter: reassurance and psychological support. A large fraction of people who go to doctors have no objectively detectable illness and really want psychiatric aid, which comes more effectively from a man or woman the patient knows than from some impersonal stranger. And for many frightened persons, reassurance is far more effective if it comes from a full-fledged M.D. than from a physician's assistant, a nurse, or some other person with less training than a physician has (Schwartz, 1971, p. 17).

The patient's viewpoint of the physician-patient relationship is just as conflicting as the physician's view. The 1963 study by National Opinion Research Corporation noted that patients thought competence was more important than a warm physician-patient relationship (Cahal, 1963). Reader et al., however, found that patients attending a clinic expected very little from the physician other than reassurance (1957). Jaco quotes a study by Feldman which found that 89 per cent of the persons interviewed were satisfied with medical care they had received in the last year. They also found that 84 per cent believed that people's chances of having good health were better today and 71 per cent believed that the reason this was so was because of more effective medical care (Jaco, 1963, p. 19). In contrast to this, Koos found in Metropolis that there was a great deal of dissatisfaction, not with the technical quality of care, but with the method in which it was delivered. Sixty-four per cent indicated that modern medical practice lacked the warmth of the physician-patient relationship they desired (Koos, 1955, p. 1552). There is, as can be seen, little conclusive data on the real importance of a physician-patient relationship, either to the physician or to the patient.

Garner and Szasz have detailed the various forms of the physician-

patient relationship. Garner notes that the role-model may be one of compliance, critical appraisal, or non-compliance (1970). The differences between these levels are mainly on the patient side of the relationship--whether the patient is asking for information, merely agreeing to do what the physician instructs, or not cooperating. Szasz also bases his models on the reactions of the patient--he terms his on a psychiatric level and includes activity-passivity, guidance-cooperation, and mutual participation (1956).

However, these models inadequately describe the reality of the physician-patient relationship. This relationship is one that has been greatly romanticized and whose confidentiality has been placed above the law. Davis characterizes the physician-patient relationship as one that is close, personal and heavily laden with magical and religious overtones of confidante and confessor. He further notes that, excepting marriage, it is probably the last area of modern life where such a relationship might still exist (Davis, 1967).

Before considering the relevance of the romanticism of the physician-patient relationship, the importance of the relationship should be evaluated. Several studies have indicated that the kind of physician-patient relationship has a great deal to do with whether medical advice is followed. Caren and Roth have conducted studies of the cooperation of patients with an ulcer diet and taking antacids. While their conclusions are limited due to the design of the study, they suggest that, of all the factors related to an ulcer patient, the amount of cooperation is related more to the physician than to any other factor (Caren & Roth, 1971; 1965). The question of compliance is one that had differing conclusions, however. Mumford notes that in most studies, at least one-third of the patients do

not follow the medical advice given them. She also observes that the causes for this are unclear, but may be due to some problem within the physician-patient relationship. One author found communication of terms to be problematic, another found the lack of authoritarianism on the part of the doctor influenced compliance; while another found that the amount of time physicians spent talking to patients did not relate at all to whether the patient complied adequately (Mumford, 1967).

It is easier to find instances where the patient suffered as a result of a lack of physician-patient relationship, than to show how the relationship influenced him positively. For example, Jacobs describes four case studies of families with retarded children in which the parents showed signs of psychological malfunctioning because of the lack of a physician-patient relationship (Jacobs, 1971).

The studies indicate that, for the patient, some sort of physician-patient relationship is necessary. This is a popular view and one that is emotionally written about by many people. Other indications reveal different factors at work. Francis et al. studied patient dissatisfaction as related to compliance. They found a significant relationship between patient satisfaction and compliance, but patient satisfaction was determined by whether the patient's expectations were met. They found that a warm, personable physician did not have any effect on following medical advice. They also noted another study which indicated a formal interaction with the doctor was more likely to result in compliance than a friendly one (Francis, et al., 1969).

Perhaps even more important in this respect is Sanazaro's study of physician performance and its effects on patients' medical care. He asked physicians to evaluate "critical incidents"--any episode of patient

care in which one or more specific actions by a physician had one or more specific beneficial or detrimental effects on a patient. The intent of the study was to try to determine categories by which to evaluate the quality of care. Ironically, however, in the reports from 2,342 specialists, the beneficial actions were in the categories of diagnosis and treatment and the detrimental actions were reported in the categories pertaining to the relationship of the patient and physician (Sanazaro & Williamson, 1970).

Certainly the physician-patient relationship has undergone much stress and some changes. Some of the most important factors, as discussed previously, are chronic diseases, specialization, and increasing manpower development. The over-all effect of these might be said to be a broadening one--the patient may need someone to interact with, but that person may not have to be a single physician.

In addition, the value placed on a warm personal relationship with a primary physician rests on an assumption that is not questioned by many authors: it is the general practitioner who is referred to as the physician in the close traditional relationship. In fact, the nostalgia for the old family physician seems to be more for his warmth and empathy than for his technical and scientific competence. Yellowlees, in defending the necessity for a generalist, describes the case history of Mr. and Mrs. Smith:

For example, the cardiologist, as he examines Mr. Smith, relates to a pair of contracting ventricles with their atria and to impulses racing down conducting tissue. As he pursues his investigations further, thanks to long training and mastery of technique, he will be able to visualize, with precision and clarity, the sclerosed valve or septal defect. These are his foreground. Mr. Smith himself, as a personality with his own particular relationships and problems, is a blurred background or a complete blank.

To the gynecologist, as he examines her for the first time, Mrs. Smith is a right ovarian cyst about the size of a grapefruit, and so sure and practiced is he that, as he does his right ovarian cystectomy, he can at the same time as he clamps and cuts discuss with the anesthesiologist his recent holiday in Majorca, or with the house surgeon the latest triumph at Twickenham. And a few days later, when he and his retinue halt on their round at the foot of Mrs. Smith's bed, the sister will say, if he has not had time to read the notes, 'Mrs. Smith is doing well,' adding in an undertone, 'the right ovarian cyst.' If recognition still does not dawn the house surgeon might prompt, also in an undertone, 'the one the size of a grapefruit.' The specialist will then be able to express affable recognition.

Long after Mrs. Smith's notes have been filed away, the specialist team will not know that she continues to complain of pain over the scar, backache, fatigue, and depression. These symptoms will not surprise the general practitioner who, having been often in the Smith household, knows that because her husband is disabled, she is trying to cope with the shop, the children and the elderly aunt who lives with the family. He will learn, too, as he supports this family, that Mrs. Smith, while she was still a schoolgirl, lost her own mother, and that the patient in the next bed to her in the hospital had a fatal cancer, so that his relationship with the Smiths is both wider and deeper than that of his hospital colleague (Yellowlees, 1969).

Given the stress put upon the physician-patient relationship by specialization, it is unlikely that the conceptualization of the traditional relationship still exists today. Certainly what Yellowlees describes is a situation that might have existed when 70 per cent of the practitioners were generalists and when medical practice was much different. In the 1970's, however, it is unlikely that even a generalist would practice medicine such as this case history describes. For example, Eimerl notes the average time spent per patient as given by three studies: a 1951 Amsterdam study gives this as three minutes; a 1956 European study estimated it to be four or five minutes; his British studies indicated five to seven minutes; and American studies indicated four to eight minutes per patient (Eimerl, 1966, p. 1549). Parrish notes an average of ten minutes per patient for general practitioners (1967, p. 897). It is very difficult to imagine a warm relationship being developed in ten minutes.

The other extreme is Slack, who surveyed 275 patients who had

been interviewed by a computer rather than by a warm physician. Of these, 80 per cent enjoyed it and many actually preferred their medical history to be taken by a machine (Slack & Van Cura, 1968).

In the face of the many and rapid changes engulfing our present medical care system, it is important to reevaluate the importance we have placed upon the traditional physician-patient relationship. One of the best ways to evaluate the importance of this relationship is to examine it in terms of eco-analysis, as indicated previously. This is to treat the health care delivery system as an ecosystem; the three critical factors as environmental stresses; and the patient, the physician, and their relationship as the participants in the ecosystem. The interrelationships of the environmental factors and the participants are complex and cause change in the ecosystem. Ecosystems are dynamic and thus constantly experiencing change (Odum, 1971). This change is expressed in terms of stages or seral levels of the ecosystem. Ecosystems move from seral level to seral level as a result of balances and imbalances of the ecosystem. The health care ecosystem is in a different seral level now than the participants are aware. This lack of awareness is due to the rate and enormity of the change (Toffler, 1970) and due to the fact that the main distributor--the physician--has not been sensitive to the other biotic community--the patient. It is imperative to the whole concept of quality medical care that we realize at what stage the health ecosystem exists and alter our perceptions of it. The conclusion that can be drawn from the literature review is that the physician-patient relationship has drastically changed, although this change has not been openly evaluated.

Since the role of the generalist in medicine has been and will remain crucial, it is imperative that the ecosystem be examined in light

of the changes in the relationship between the physician and the patient in regard to specialist versus generalist. The structure of the entire medical profession hinges on how general practice is viewed. Stevens notes the following insight:

If a national health service had been introduced in the 1940's, before the number of general practitioners had declined too far, the general practitioner might have been able to move at one jump from the past to the future. Without the formal consultation or referral structure which a national health service promised to provide, general practitioners were left to fend for themselves. Seeking to enhance their position in the years following World War II, they sought to justify the continued existence of general practice in terms of professional status rather than health service organization. It is an interesting observation on the professionally dominated medical care system of the United States that the *raison d'être* of the whole operation--the patient--was rarely consulted; nor, indeed, following the failure of national health insurance, did he show much interest (Stevens, 1971, p. 294).

This dissertation will therefore focus on the patient's perceptions of the health care ecosystem as it exists today. This especially involves the perception of the place of the general practitioner in the organizational system and the attitudes of the consumers toward specialists and general practitioners.

CHAPTER IV

STATEMENT OF THE HYPOTHESES AND METHODS

In view of the before-mentioned changes taking place within the health care ecosystem, especially with respect to the phenomenon of specialization, it is amazing that so little research has been done on how these changes have affected the patient, the physician, and their relationship. There is very little information on whether the concept of "family" or "personal" physician even exists for patients today. The warm physician-patient relationship is viewed by the physician as necessary, even though he is not exposed to it in medical school and even though in his practice he spends only about ten minutes with each patient. The literature concerning the importance of the physician-patient relationship to the patient presents a confusing image. As far as can be determined, no studies have been done on the problem of how specialization influences the patient's concept of the physician-patient relationship.

This study will analyze the utilization of general practitioners and specialists for ambulatory primary care by Oklahoma City residents and evaluate the relationship between the type of physician they utilize and their attitude toward the physician-patient relationship.

The three hypotheses to be tested are null: that is, they predict that no significant differences will be found. The three hypotheses are as follows:

Hypothesis I: Utilization of a specialist or a general practitioner for primary ambulatory care is not related to the patient's attitudes toward the physician-patient relationship.

Hypothesis II: No significant relationship exists between the type of physician utilized for primary care and the patient's image of the physician.

Hypothesis III: No significant relationship exists between the patient's perceived medical knowledge and the type of physician he utilizes for primary ambulatory care.

The three hypotheses are discussed and instrumentation explained below.

Hypothesis I: Utilization of a specialist or a general practitioner for primary ambulatory care is not related to the patient's attitudes toward the physician-patient relationship.

Alternate: Utilization of a specialist for primary ambulatory care is related to a more positive attitude toward professional competence than toward the physician-patient relationship.

The type of physician utilized is categorized either as a specialist or a general practitioner. A specialist is defined as anyone with an M.D. or D.O. degree, other than a general practitioner or a family physician, including those that have limited practices, but are not board certified. A general practitioner is an M.D. or D.O. who does not specialize in his practice. Primary care denotes ambulant, non-emergency health care. If a person contacts a specialist without being specifically referred by a general practitioner, he is included in the category of utilizing a specialist for primary care. Attitudes toward the physician-patient relationship are measured by a Thurstone Scale, as described later. Those interviewed are referred to throughout this study as patients, although this is technically not true, since they are not actually waiting to see a physician at the time of their interview. The information gathered, however, deals with their health behavior as patients. They are asked to recall this throughout the entire questionnaire, either by direct questioning or

by indirect measurements. For this reason, the sample interviewed will be referred to as "patients." The complete questionnaire is contained in Appendix A. For easy reference to the various parts, it has been divided into tables.

In order to quantify utilization of a specialist or a general practitioner for primary care, a Utilization Index has been devised. This index is based on the following axioms that are basic to the medical care system as it exists today:

- 1) The general practitioner is the principle source of health information and advice for the entire family.
- 2) The general practitioner is the first source of care sought in a non-emergency illness situation.
- 3) Specialists are not consulted unless the general practitioner indicates the necessity of doing so.
- 4) The general practitioner serves the entire family, unless he directs otherwise.

The questions derived from these axioms are found in Appendix A, Table 1. For these items of classification, a score of one is given for each answer implying a central source of care for the entire family unit that is a general practitioner. As can be seen from the questionnaire, a maximum score of 7 is possible on this part. Respondents that score 5, 6, or 7 are categorized as utilizing a general practitioner for primary ambulatory care, while those scoring 4 or below are categorized as utilizing specialists for this type of care. No attempt is made to weight these items. Therefore, the utilization of one physician for information is viewed as being equally important as utilizing one physician for emergency care.

According to Sherif and Sherif, attitudes are functional categories formed in relation to experiences within social stimulus settings

that have the potential for action (Sherif & Sherif, 1969). Therefore, whenever a person has contact with a physician, he forms an attitude about that individual physician, which is then generalized to all physicians. These attitudes then predicate further behavior.

Attitudes toward the physician-patient relationship are measured using a section of Hulka's Thurstone-type scale. The entire scale measures three areas of medical care--physician-patient relationship, physician competence, and cost convenience. Although the scale has not been factor-analyzed, the authors have done parallel form reliability tests by developing two subscales within each content area and calculating a correlation coefficient for the two subsets of statements. A correlation coefficient of 0.75 was obtained for the part of the scale dealing with personal qualities and 0.63 was obtained for the content area measuring professional competence (Hulka, et al., 1970). The third content area dealing with cost-convenience, was not given to the sample. Table 2 of Appendix A contains the items and the scale values measuring satisfaction with the personal qualities of a physician. The items pertaining to professional competence are found in Appendix A, Table 3.

The responses to the items are agree or disagree. The respondent's score is the sum of the scale values of the items with which he agrees, divided by the number of items with which he agrees (mean acceptance score). A high score indicates favorable attitudes and a low score unfavorable attitudes toward physicians. The hypothesis is tested by comparing the score of those who utilize specialists with those who utilize general practitioners as determined by the Utilization Index. The possibility of a third group exists--one that utilizes non-M.D. or non-D.O. practitioners. These will be treated separately if the numbers are large

enough to warrant analysis. If not, they will be dropped from the sample.

The Kolmogorov-Smirnov test is used to accept or reject the null hypothesis. This is used because of the nature of the data: the Thurstone gives at least an ordinal measurement and the assumption of a normally distributed population is unnecessary with a nonparametric statistic. In addition, the Kolmogorov-Smirnov is sensitive not only to measures of central tendency, but also to the distribution of scores, which is of interest here. A one-tailed test will be utilized to test each of the three hypotheses. The one-tailed test is used to decide whether the values of the population from which one of the samples was drawn are larger than the values of the population from which the other sample was drawn (Siegel, 1956). The prediction tested in this study is that one group, those who utilize specialists, will score higher than those who utilize general practitioners. This prediction is stated in the alternate hypotheses. The 5 per cent level is considered statistically significant for all the tests utilized throughout this study.

Hypotheses II: No significant relationship exists between the type of physician utilized for primary care and the patient's image of the physician.

Alternate: Utilization of a specialist for primary ambulatory care is related to a less positive image of the general practitioner.

The type of physician utilized for primary care is as determined in the first hypothesis. The image of the physician is the amount of esteem with which the patient regards the practitioner. This amount of esteem is measured by the utilization of two scales.

Scales designed in the manpower development field measure patient acceptance of ancillary medical personnel, by examining the tasks assigned to physicians and non-physicians in the health field. These have been

modified to measure whether there is any differentiation in the eyes of the patient in regard to the proper authority of a general practitioner and a specialist.

The tasks are listed in Table 4 of Appendix A. Items one through seven are from Resnik's scale, which differentiates between the tasks appropriate to a nurse and to a physician (Lewis & Resnik, 1967). Items eight through twelve are tasks that are routine and clearly within the realm of the general practitioner. Items thirteen through seventeen are more skill-oriented tasks that can be carried out by a general practitioner but may also be viewed as appropriate for a specialist. There is a maximum score of seventeen, with one point for each item assigned as appropriate for a general practitioner. The score is assigned by means of a ratio to take into account unanswered or incompletely answered items; thus the scoring is the number of points assigned to the general practitioner in relation to the total number answered.

The higher the score, the more tasks relegated to the general practitioner. The more tasks recognized as under the jurisdiction of a general practitioner, the more positive the image of the general practitioner. This is especially true, since the tasks are all within the professional ability of a general practitioner.

The second scale, adapted from Cahal, is a more direct measurement of the image of the general practitioner and the specialist (Cahal, 1963), and is in Appendix A, Table 5.

The scoring on this scale also consists of one point for each indication of general practitioner. Again, a ratio of points for a general practitioner to total number answered is utilized. The higher the score the more positive the image of the general practitioner.

The Task Preference Scale and the Characteristics Scale are both analyzed by utilizing the one-tailed Kolmogorov-Smirnov test at the 5 per cent level.

Hypothesis III: No significant relationship exists between the patient's perceived medical knowledge and the type of physician he utilizes for primary ambulatory care.

Alternate: Utilization of a specialist for primary ambulatory care is related to a higher degree of perceived medical knowledge.

Medical knowledge is defined as exhibiting an understanding of selected concepts. A popular way to test medical knowledge has been to select medical terms and ask for definitions, as Hankins did (1968). However, this type of scale does not indicate an understanding of medical concepts. In an effort to get at this area of understanding, a scale developed by Grubb is modified and used (1970). Questions about medical conditions will be asked with four possible answers, one of which is "don't know." The questions are in Table 7 of Appendix A.

Two points are scored for the correct answer; one point for an incorrect answer and no points for a "don't know." The rationale for this type of scoring procedure is that people will act on knowledge that they have, even if it is incorrect. This scoring mechanism attempts to take into account the patient's own perception of his medical condition, regardless of the scientific accuracy of this understanding. The Kolmogorov-Smirnov one-tailed test at the 5 per cent significance level is utilized.

Tables 6, 8 and 9 of Appendix A complete the questionnaire as administered to the sample. These items constitute the secondary factors which have a bearing on the acceptance or rejection of the three hypotheses.

Table 6 contains the three most frequently named items in Mechanic's 1968 study of Wisconsin mothers. The respondents in Mechanic's

study were asked to describe in their own terms the qualities that make a good physician (Mechanic, 1968). Additional items are given in the last part of the questionnaire, which is found in Table 9. The remaining items included in Table 9 are other factors that are analyzed with respect to the three hypotheses, including age, perceived health status, frequency of physician contact within the last twelve months, socio-economic status, and time involved in a physician visit. Age is the age as of the last birthday. Perceived health status is self-evaluated rating of current health status as poor, fair, average, above average, or excellent. Frequency of physician contact within the last 12 months is the self-estimated number of visits the family unit made to all physicians' offices in the last year. Socio-economic status is measured using Hollingshead's two-index classification by occupation and education. Time involved in a physician visit is measured by dealing with both time and geographical distance.

The last questionnaire item is found in Table 8 of Appendix A and is a scale attempting to measure the strength of self-diagnosis of the patient. Self-diagnosis is assumed to be related to either the patient's actual knowledge or the perceived knowledge of his medical condition. The scoring of these Thurstone-type items is also in Table 8.

Sample and Methods

The sample consists of 200 respondents from the metropolitan area of Oklahoma City. The sample is stratified geographically in order to include only those families with the financial capability to select a specialist. By mapping the locations of offices of specialists and general practitioners and by means of housing patterns reflecting economic patterns,

the northwest and far southwest areas of Oklahoma City were selected. The method of mapping the offices was done in an effort to control for geographical accessibility of both general practitioners and specialists. With a metropolitan area connected by a highway system, this precaution may not be necessary, but was still done in order to make the two areas as similar as possible.

Since telephone exchanges in Oklahoma City are geographical, the sample boundary lines are set by utilizing the 94-exchange for northwest Oklahoma City and the 63- and 68-exchange for southwest Oklahoma City. To make the two areas more similar economically and to eliminate business areas, the following further subdivisions are made: the northwest sample is drawn from an area bounded by Meridian and Villa and between 23rd and 50th streets. That is roughly one-half of the entire 94- area. The southwest sample is drawn from an area bounded by Western and May and between 59th street and 89th street.

The sample is drawn from the Criss-Cross Telephone Directory, a directory that lists the telephone numbers by exchanges. This listing is as complete as is the Oklahoma City Telephone Book. Two series of random numbers are generated. The first identifies the page number and the second identifies the listing on that page. Once a listing is selected, the address is examined. If it falls within the areal sub-division of each telephone exchange, it is selected for the sample. If not, the next listing is checked until an address within the sample area is selected.

A letter is sent to those selected for the sample explaining the project and asking for their participation and cooperation (Appendix B). Within a week of receiving the letter, they are contacted for the interview by telephone. This method of collecting data is selected as most

feasible, given time, physical limitations, and sample size needed. In an attitude study, a large sample size is desired. By utilizing the telephone, more interviews can be completed in the same amount of time than with personal contact. Colombotos has completed studies indicating that there were no significant differences in responses between telephone and personal interviews when asking socially-accepted items (Colombotos, 1971). The interview is conducted with the woman of the household. This selection is made for several reasons. First, the wife and/or mother is probably the best source of information on health matters pertaining to the family. Second, the woman is more likely to be the influential decision-maker for the type of health care the entire family receives. Third, women generally have had more experience with the health care system than men, who see a physician less. When he does contact a physician, it is more likely to be one that is contracted by his place of employment.

CHAPTER V

RESULTS

Description of the Sample

The sample for this study is 200 Oklahoma City respondents, with 100 from the Northwest part of the city and 100 from the Southwest. The method of sample selection is detailed in Chapter IV. Two hundred and fifty letters were sent to those selected for the study. Of the 50 that are not included in the sample, 25 refused to participate, either by notifying the author as requested in the letter, or by refusing when contacted by phone. Of these, fourteen were either "too busy," "didn't want to," or felt that the study was an invasion of privacy. The other eleven who refused did so because they or a member of their family were sick. Twenty-three persons could not be reached either because the letter was returned, the telephone number was incorrect, or they had moved away from Oklahoma City. The remaining two are respondents that utilize chiropractors for their main source of health care. A description of their answers to the questionnaire is in Appendix F. No marked differences appeared in refusal rate by area.

In general, the response of the sample to the method of telephone interviews was favorable. The majority of respondents seemed eager to cooperate. A few did protest the length of time required. This questionnaire probably approaches the maximum time that should be considered fea-

sible for a telephone survey: an interview of more than twenty minutes would probably be too long. The overall refusal rate of twenty per cent is certainly far lower than would be obtained in a mail survey.

All respondents are female. Fourteen of these live alone. The age range for the Northwest area is from 24 to 72; the range for the Southwest area is from 21 to 83. Fifty-six per cent of those living in the Northwest area are in Hollingshead's Class III; 59 per cent of those in the Southwest area are in Class III. Of the 200 respondents 91 (45.50 per cent) are classified as utilizing general practitioners for primary ambulatory care and 109 (54.50 per cent) are classified as utilizing specialists for primary care. The percentage of those classified as utilizing specialists is lower than the investigator expected, but is far higher than the 1963 study by the National Opinion Research Corporation that reported only 14 per cent of the sample turning to specialists for their primary care (Cahal, 1963).

The three hypotheses tested and the main results are included in this chapter.

Hypothesis 1: Utilization of a specialist or a general practitioner for primary ambulatory care is not related to the patient's attitudes toward the physician-patient relationship.

Alternate: Utilization of a specialist for primary ambulatory care is related to a more positive attitude toward professional competence than toward the physician-patient relationship.

This hypothesis is tested by the uses of two instruments, found in Tables 2 and 3 of Appendix A. The test statistic is Kolmogorov-Smirnov which is sensitive to differences in distribution of the two populations. In using the one-tailed test, the alternate hypothesis predicts the direction of the difference.

The mean of the scores for general practitioners on the scale

measuring satisfaction with the physician-patient relationship (Table 2, Appendix A) is 6.175. The mean for those utilizing specialists for primary ambulatory care is 6.231. Table 1 shows the raw scores and the relative cumulative frequencies, upon which the Kolmogorov-Smirnov test is based.

TABLE 1

SUMMARY OF SCORES ON THE THURSTONE SCALE MEASURING SATISFACTION
WITH THE PHYSICIAN-PATIENT RELATIONSHIP BY TYPE OF
PHYSICIAN UTILIZED FOR PRIMARY CARE

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
3.51 - 3.60	-	0	-	0
3.61 - 3.70	-	0	-	0
3.71 - 3.80	1	.010	-	0
3.81 - 3.90	-	0	-	0
3.91 - 4.00	1	.021	-	0
4.01 - 4.10	-	.021	1	.009
4.11 - 4.20	-	-	-	.009
4.21 - 4.30	2	.043	-	.009
4.31 - 4.40	-	.043	-	.009
4.41 - 4.50	-	.043	1	.018
4.51 - 4.60	1	.054	2	.036
4.61 - 4.70	-	.054	-	.036
4.71 - 4.80	4	.098	2	.055
4.81 - 4.90	2	.120	1	.064
4.91 - 5.00	-	.120	2	.082
5.01 - 5.10	-	.120	6	.137
5.11 - 5.20	1	.131	2	.150
5.21 - 5.30	1	.142	1	.165
5.31 - 5.40	1	.153	1	.174
5.41 - 5.50	4	.197	1	.183
5.51 - 5.60	1	.208	-	.183
5.61 - 5.70	1	.219	6	.238
5.71 - 5.80	-	.219	2	.256
5.81 - 5.90	8	.307	9	.339
5.91 - 6.00	3	.340	3	.366
6.01 - 6.10	6	.406	4	.403
6.11 - 6.20	1	.417	3	.431
6.21 - 6.30	6	.483	3	.458
6.31 - 6.40	3	.516	1	.467
6.41 - 6.50	5	.571	3	.495
6.51 - 6.60	6	.637	10	.587

TABLE 1--Continued.

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
6.61 - 6.70	3	.670	5	.633
6.71 - 6.80	3	.703	5	.678
6.81 - 6.90	9	.802	20	.862
6.91 - 7.00	4	.846	7	.926
7.01 - 7.10	-	.846	1	.935
7.11 - 7.20	8	.934	6	.990
7.21 - 7.30	5	.989	1	1.00
7.31 - 7.40	1	1.00	-	1.00
7.41 - 7.50	-	1.00	-	1.00
7.51 - 7.60	-	1.00	-	1.00

n = 91

n = 109

$$D^{**} = .089; \chi^2_{2df}^{***} = 1.571; p > .05$$

* r.c.f. = relative cumulative frequency

** D = maximum difference between the two relative cumulative frequencies

*** χ^2_{2df} = For large samples, the Kolmogorov-Smirnov test approaches a chi square distribution with two degrees of freedom.

The null hypothesis that there is no difference in the two distributions is not rejected. An additional test by chi square on grouped scores shows that the percentages scoring high and low are about the same for those utilizing general practitioners and those utilizing specialists. In both groups, a large majority express satisfaction with the physician-patient relationship.

The second Thurstone scale, found in Table 3 of Appendix A, measures satisfaction with the professional competence of the physician. The mean of the scores for those utilizing specialists is 6.08. The mean of the scores for those utilizing general practitioners is 5.98. Table 3 shows the numbers and relative cumulative frequencies for the two

populations.

TABLE 2

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY SCORES ON THURSTONE
SCALE MEASURING SATISFACTION WITH THE PHYSICIAN-PATIENT
RELATIONSHIP: CHI SQUARE ANALYSIS

Scores	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
3.00 - 4.99	12	13.17	9	8.26
5.00 - 6.99	65	71.42	90	82.57
7.00 +	14	15.41	10	9.17
n = 200	91	100.00	109	100.00

$$\chi^2 = 3.53; df = 2; p > .05$$

TABLE 3

SUMMARY OF SCORES ON THE THURSTONE SCALE MEASURING SATISFACTION
WITH PROFESSIONAL COMPETENCE OF THE PHYSICIAN BY TYPE OF
PHYSICIAN UTILIZED FOR PRIMARY CARE

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
4.71 - 4.80	2	.021	-	0
4.81 - 4.90	1	.032	1	.009
4.91 - 5.00	1	.043	3	.036
5.01 - 5.10	1	.054	2	.055
5.11 - 5.20	1	.065	-	.055
5.21 - 5.30	6	.131	-	.055
5.31 - 5.40	2	.153	4	.091
5.41 - 5.50	2	.175	2	.110
5.51 - 5.60	4	.219	8	.183
5.60 - 5.70	5	.274	4	.220
5.71 - 5.80	8	.363	7	.284
5.81 - 5.90	4	.406	9	.366
5.91 - 6.00	4	.450	8	.440
6.01 - 6.10	8	.538	3	.467

TABLE 3--Continued.

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
6.11 - 6.20	11	.659	16	.614
6.21 - 6.30	3	.692	3	.642
6.31 - 6.40	5	.747	1	.651
6.41 - 6.50	9	.846	17	.807
6.51 - 6.60	5	.901	8	.880
6.61 - 6.70	6	.967	3	.908
6.71 - 6.80	-	-	2	.926
6.81 - 6.90	1	.978	1	.935
6.91 - 7.00	-	.978	5	.981
7.01 - 7.10	-	.978	2	1.00
7.11 - 7.20	2	1.00	-	1.00

n = 91

n = 109

$$D^{**} = .096; \chi^2_{2df}^{***} = 1.827; p > .05$$

* r.c.f. = relative cumulative frequency

** D = maximum difference between the two relative cumulative frequencies

*** χ^2_{2df} = For large samples, the Kolmogorov-Smirnov test approaches a chi square distribution with two degrees of freedom.

The null hypothesis that there is no difference between the two groups is not rejected based on the small value obtained with the Kolmogorov-Smirnov test.

An additional test by chi square on grouped scores further reveals the similarity in the two populations.

There are no differences between the two groups in satisfaction with the professional competence of the physician. Over 50 per cent of both populations scored above 6.00, which seems to indicate a high level of satisfaction with the professional competence of the physician.

Appendix C shows the actual scores for each group on both Thurstone scales.

TABLE 4

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY SCORES ON THURSTONE
SCALE MEASURING SATISFACTION WITH PROFESSIONAL COMPETENCE
OF THE PHYSICIAN: CHI SQUARE ANALYSIS

Scores	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
0 - 5.99	41	45.05	48	44.04
6.00 +	50	54.95	61	55.96
n = 200	91	100.00	109	100.00

$$\chi^2 = 0.00; p > .05$$

Hypothesis I: No significant relationship exists between the type of physician utilized for primary care and the patient's image of the physician.

Alternate: Utilization of a specialist for primary ambulatory care is related to a less positive image of the general practitioner.

This hypothesis is tested by utilization of two scales. The first one, Task Preference Scale, is found in Table 4 of Appendix A. This scale measures the image of the general practitioner by how many tasks are designated as within his professional competence. A high score indicates a more positive image of the general practitioner.

The mean score for those utilizing general practitioners is .721; the mean score for those utilizing specialists is .406. Table 5 shows the summary of the scores and the relative cumulative frequencies for both groups.

From this table the distributions of these two populations are seen as significantly different beyond the .001 value. Therefore, the null hypothesis of no difference between the two groups is rejected and the

alternate hypothesis stating that those that utilize specialists have a lower image of the general practitioner is accepted. This direction of difference is further clarified by Table 6 which shows a chi square analysis of the same data.

TABLE 5

SUMMARY OF SCORES ON THE TASK PREFERENCE SCALE BY THE
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
0.00	-	0	18	.165
0.062	-	0	1	.174
0.076	-	0	1	.183
0.117	2	.021	7	.247
0.176	-	.021	3	.275
0.187	-	.021	2	.293
.200	-	.021	3	.300
.266	-	.021	1	.330
.285	-	.021	1	.339
.294	-	.021	4	.376
.312	-	.021	3	.403
.333	-	.021	2	.422
.352	-	.021	1	.431
.375	-	.021	2	.449
.411	1	.032	5	.495
.417	-	.032	1	.504
.437	1	.043	1	.513
.470	-	.043	4	.550
.500	5	.098	5	.596
.529	3	.131	6	.651
.562	3	.164	5	.697
.580	-	.164	2	.715
.588	3	.197	5	.761
.600	1	.208	-	.761
.615	1	.219	-	.761
.625	5	.274	-	.761
.647	10	.384	5	.807
.666	-	.384	2	.825
.687	1	.395	2	.844
.692	1	.406	-	.844
.705	7	.483	1	.853
.714	2	.505	-	.853
.733	1	.516	-	.853
.750	2	.538	-	.853

TABLE 5--Continued.

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
.764	7	.615	5	.899
.800	2	.637	1	.908
.813	-	.637	2	.926
.823	10	.747	2	.944
.830	1	.758	-	.944
.833	2	.780	-	.944
.846	1	.791	-	.944
.866	1	.802	-	.944
.875	4	.847	1	.954
.882	3	.879	3	.981
.933	1	.890	-	.981
.941	4	.934	-	.981
.950	1	.945	-	.981
1.00	5	1.00	2	1.00

n = 91

n = 109

$$D^{**} = .564; \chi^2_{2df}^{***} = 63.102; p < .001$$

* r.c.f. = relative cumulative frequency

** D = maximum difference between the two relative cumulative frequencies

*** χ^2_{2df} = For large samples, the Kolmogorov-Smirnov test approaches a chi square distribution with two degrees of freedom.

TABLE 6

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY SCORES ON
TASK PREFERENCE SCALE: CHI SQUARE ANALYSIS

Scores	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
0.00 - .599	18	19.78	83	76.15
.600 - 1.00	73	80.22	26	23.85
n = 200	91	100.00	109	100.00

$$\chi^2 = 65.310; p < .001$$

Those who utilize specialists score the general practitioner significantly lower on the Task Preference Scale than do those who utilize general practitioners.

The second scale used to determine the image of the general practitioner is the Characteristic Scale, which is found in Table 5 of Appendix A. The mean score for those utilizing general practitioners is .684; the mean score for those utilizing specialists is .421. Table 7 shows the summary of actual scores and the relative cumulative frequencies.

TABLE 7

SUMMARY OF SCORES ON THE CHARACTERISTICS SCALE BY TYPE
OF PHYSICIAN UTILIZED FOR PRIMARY CARE

Scores	General Practitioners		Specialist	
	number	r.c.f.*	number	r.c.f.*
0.00	3	.032	22	.201
0.001	-	.032	2	.220
0.100	-	.032	4	.256
0.125	-	.032	2	.275
0.200	-	.032	5	.321
0.222	-	.032	1	.330
0.250	-	.032	2	.348
0.285	1	.043	3	.376
0.333	-	.043	1	.385
0.375	1	.054	1	.394
0.400	2	.076	3	.422
0.428	-	.076	4	.458
0.444	2	.098	2	.477
0.500	8	.186	13	.596
0.555	6	.252	-	.596
0.571	1	.263	1	.605
0.600	13	.406	12	.715
0.625	3	.439	2	.733
0.630	1	.450	-	.733
0.666	1	.461	2	.752
0.667	-	.461	1	.761
0.669	-	.461	1	.770
0.700	10	.571	7	.834
0.714	2	.593	1	.844

TABLE 7--Continued.

Scores	General Practitioners		Specialist	
	number	r.c.f.*	number	r.c.f.*
0.750	4	.637	3	.871
0.777	-	.637	3	.899
0.800	10	.747	3	.926
0.830	-	.747	1	.935
0.833	2	.769	-	.935
0.857	2	.791	-	.935
0.888	1	.802	1	.944
0.900	7	.879	3	.972
1.00	11	1.00	3	1.00

n = 91

n = 109

$$D^{**} = .410; \chi^2_{2df}^{***} = 33.347; p < .001$$

* r.c.f. = relative cumulative frequency

** D = maximum difference between the two relative cumulative differences

*** χ^2_{2df} = For large samples, the Kolmogorov-Smirnov test approaches a chi square distribution with two degrees of freedom.

On the basis of Table 7, the null hypothesis of no difference between the two groups is rejected and the alternate hypothesis that those who utilize specialists have a lower image of general practitioners is accepted. This direction of difference is emphasized by Table 8 which shows a chi square analysis of the grouped data.

Those who utilize specialists have a significantly lower image of general practitioners than do those who utilize general practitioners. Therefore, there is a significant relationship between the type of physician utilized for primary ambulatory care and the image of the general practitioner.

The actual scores for the Task Preference Scale and the Characteristic Scale are found in Appendix D.

TABLE 8

**TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY SCORES
ON CHARACTERISTIC SCALE: CHI SQUARE ANALYSIS**

Scores	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
0.00 - 0.39	5	5.49	43	39.44
0.40 - 0.79	53	58.23	55	50.45
0.80 - 1.00	33	36.28	11	10.11
n = 200	91	100.00	109	100.00

$$\chi^2 = 39.84; df = 2; p < .001$$

Hypothesis III: No significant relationship exists between the patient's perceived medical knowledge and the type of physician he utilizes for primary ambulatory care.

Alternate: Utilization of a specialist for primary ambulatory care is related to a higher degree of perceived medical knowledge.

The instrument used to measure perceived medical knowledge is found in Table 7 of Appendix A. The mean score of those utilizing general practitioners is 15.31; the mean score of those utilizing specialists is 16.42. Table 9 gives the summary of the scores and the relative cumulative frequencies of the two groups.

For a one-tailed test, the value given by the Kolmogorov-Smirnov test is significant at the five per cent level. Therefore, the null hypothesis of no difference in perceived medical knowledge is rejected and the alternate, which states that those who utilize specialists have a higher perception of medical knowledge, is accepted. Table 10 shows an additional analysis by chi square which clarifies the direction of the

difference.

TABLE 9
SUMMARY OF SCORES ON PERCEIVED MEDICAL KNOWLEDGE BY
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

Scores	General Practitioner		Specialist	
	number	r.c.f.*	number	r.c.f.*
0	1	.010	-	0
5	-	.010	1	.009
6	2	.032	-	.032
7	1	.043	1	.018
8	1	.054	-	.018
9	2	.076	1	.027
10	8	.164	2	.045
11	1	.175	4	.082
12	6	.241	6	.137
13	2	.263	4	.174
14	7	.340	6	.229
15	6	.296	8	.302
16	11	.527	6	.357
17	9	.626	17	.513
18	13	.769	24	.733
19	11	.890	21	.926
20	10	1.00	8	1.00

n = 91

n = 109

$$D^{**} = .170; \chi^2_{2df}^{***} = 5.554; p < .05$$

* r.c.f. = relative cumulative frequency

** D = maximum difference between the two relative cumulative frequencies

*** χ^2_{2df} = For large samples, the Kolmogorov-Smirnov test approaches a chi square distribution with two degrees of freedom.

Of these who utilize specialists, over 60 per cent scored above 17 while of these who utilize general practitioners, only 47 per cent scored above 17. Perceived medical knowledge is therefore related to the type of physician the patient has selected to utilize.

The actual scores of the two groups are found in Appendix E.

TABLE 10

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY SCORES ON
PERCEIVED MEDICAL KNOWLEDGE: CHI SQUARE ANALYSIS

Scores	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
0 - 10	15	116.48	5	4.58
11 - 13	9	9.88	14	12.83
14 - 16	24	26.36	20	18.34
17 - 20	43	47.28	70	64.25
n = 200	91	100.00	109	100.00

$$\chi^2 = 11.38; df = 3; p < .02$$

On the basis of the statistical tests, the first null hypothesis is not rejected; the other two are rejected and their respective alternate hypotheses are accepted. The meaning of the acceptance and rejection of these are explored in Chapter VI. Also contained in Chapter VI are analysis of other important variables.

CHAPTER VI

DISCUSSION OF THE RESULTS

This chapter amplifies on the meaning of the acceptance or rejection of the three hypotheses and further explores the other factors that are examined. For evaluation of these factors, the chi square test is used. Since no directions are predicted in these instances, the area of rejection is two-tailed. The level of significance is the 5 per cent level for all of the tests contained in this chapter.

Hypothesis I

In Chapter V, the null hypothesis I was not rejected. Therefore, the type of physician utilized seems to have no relationship with the attitude toward either professional competence or the personal physician-patient relationship. Both groups have a fairly high level of satisfaction with both the professional competence of physicians and the personal physician-patient relationship.

The mean of the scores may be compared with Hulka's et al. study of a low-income population. In the present study, those utilizing general practitioners have a mean of 6.17 on the scale measuring satisfaction with the physician-patient relationship, while those utilizing specialists have a mean score of 6.23. Those utilizing general practitioners have a mean score of 5.98 on the scale measuring satisfaction with professional compe-

tence, while those using specialists have a mean score of 6.08. In Hulka's study, the mean of the scale measuring satisfaction with the physician-patient relationship was 6.52 and the mean of the professional competence was 5.85. A score of 5.5 is considered neutral for either scale (Hulka, et al., 1971). Both values on the physician-patient relationship scale are higher than the values on the professional competence scale.

Appendix G contains a table showing the relationship of the scores on the two scales. As can be seen from that table, as the score of the scale measuring satisfaction with personal relationship increases, the score on the professional competence scale decreases. When the scores on the personal relationship scale are lower, the score on the professional competence are higher. Thus, the scores seem to be inversely related; the sample seems to be selecting either competence or personal relationship.

Table 11 shows the results of an item analysis on each item of the Thurstone scale measuring satisfaction with the physician-patient relationship. These are tested by utilizing chi square.

There are no significant differences in responses on any of the items. The responses to item 10, which approaches significance, shows that while 70 per cent of those utilizing general practitioners agreed that most doctors let you talk out your problems, 80 per cent of those who utilize specialists agree to this item. While this may be due to the high patient load of general practitioners, it is more likely that this is reflecting the perceived quality of relationship, since 78 per cent of both groups agreed that physicians could not get to know all their patients since they had so many to see. Those that utilize specialists for primary ambulatory care view their physician as more willing to listen

TABLE 11

ITEM ANALYSIS OF THE THURSTONE SCALE MEASURING SATISFACTION WITH PHYSICIAN-PATIENT
RELATIONSHIP BY TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

ITEMS	ITEMS AGREED TO					
	Physician Utilized				χ^2	p
	G. P. n = 91 n %		Specialist n = 109 n %			
1. You cannot expect any one doctor to be perfect.	82	90.10	98	89.90	0.035	NS
2. Doctors make you feel like everything will be all right.	58	63.75	72	66.05	0.241	NS
3. A doctor's job is to make people feel better.	83	91.20	99	90.82	0.023	NS
4. Too many doctors think you cannot understand the medical explanation of your illness, so they do not bother explaining.	44	48.35	42	38.53	1.571	NS
5. Doctors act like they are doing you a favor by treating you.	24	26.37	26	23.85	0.060	NS
6. A lot of doctors do not care whether or not they hurt you during the examination.	8	8.79	10	9.17	0.117	NS
7. Many doctors treat the disease but have no feeling for the patient.	20	21.97	32	29.35	1.813	NS
8. Doctors should be a little more friendly than they are.	36	39.56	35	32.11	1.359	NS
9. Most doctors have no feelings for their patients.	9	9.89	7	6.42	0.407	NS
10. Most doctors let you talk out your problems.	64	70.32	88	80.73	3.541	NS
11. Doctors are devoted to their patients.	59	64.83	79	72.47	1.734	NS
12. Doctors do their best to keep you from worrying.	78	85.71	93	85.32	0.015	NS
13. With so many patients to see, doctors cannot get to know them all.	71	78.02	85	77.98	0.093	NS
14. Most doctors take a real interest in their patients.	75	82.41	94	86.23	0.883	NS

to their problems than do those who utilize general practitioners for primary care.

Table 12 shows an item analysis of the Thurstone scale measuring satisfaction with professional competence, utilizing chi square for the statistical analysis.

Significant differences appear on only one item on this scale, which is item 11, dealing with the amount of knowledge required of physicians. A significantly higher number of people utilizing specialists agree that doctors are put in the position of needing to know more than they possibly could. This may be a reflection of some knowledge that leads these people to select specialists in the first place: their perception of medicine as a profession may be more sophisticated than those who utilize general practitioners. While most in the sample disagreed with item four, slightly more people who utilize general practitioners agreed that no two doctors agree on what is wrong with a patient.

In both groups, the majority of those interviewed seem to have favorable attitudes toward physicians. Very few agreed to the very obviously negative questions. However, one-fourth of the total sample feel that doctors act like they are doing one a favor by treating him. Almost one-half of the sample reflect a communication problem when they agree that physicians do not explain their diagnosis clearly enough.

Although the type of physician utilized has no relationship to the attitudes toward the physician-patient relationship and the professional competence of physicians as measured by these scales, the utilization patterns differ markedly between those who receive primary care from the general practitioner and those who consult specialists. Tables 13 through 18 reflect the analysis of questionnaire items in Appendix A,

TABLE 12

ITEM ANALYSIS OF THE THURSTONE SCALE MEASURING SATISFACTION WITH PROFESSIONAL COMPETENCE
BY TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

ITEMS	ITEMS AGREED TO					
	Physician Utilized				χ^2	p
	G. P. n = 91		Specialist n = 109			
	n	%	n	%		
1. People do not know how many mistakes doctors really make.	76	83.51	92	84.40	0.132	NS
2. Today's doctors are better trained than ever before.	87	95.60	103	94.49	*	
3. Doctors rely on drugs and pills too much.	35	38.46	32	29.35	1.459	NS
4. No two doctors will agree on what is wrong with a person.	12	13.18	6	5.04	2.697	NS
5. Given a choice between using an old reliable drug and a new experimental one, many doctors will choose the new one.	27	29.67	29	26.60	0.104	NS
6. Doctors will not admit it when they do not know what is wrong with a person.	27	29.67	29	26.60	0.104	NS
7. When doctors do not cure mildly ill patients, it is because the patients do not cooperate.	71	78.02	85	77.98	0.027	NS
8. Doctors will do everything they can to keep from making a mistake.	88	96.70	106	97.24	*	
9. Many doctors just do not know what they are doing.	10	10.98	10	9.17	0.035	NS
10. Doctors spend more time trying to cure an illness you already have rather than preventing one from developing.	49	53.84	52	47.77	0.522	NS
11. Doctors are put in the position of needing to know more than they possibly could.	64	70.32	89	81.65	4.193	<.05
12. Even if a doctor cannot cure you right away, he can make you more comfortable.	90	98.90	107	98.16	*	
13. Doctors can help you both in health and sickness.	91	100.00	108	99.08	*	
14. Doctors sometimes fail because patients do not call them in time.	90	98.90	108	99.08	*	

* χ^2 not applicable: expected frequency is less than 5 per cell.

Table 1.

As shown in Table 13, of those that utilize general practitioners as family doctors, a significantly higher number of them have one source to call upon for emergency care.

TABLE 13

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
SOURCE OF EMERGENCY CARE

Sources of Care	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Meet or call main physician	67	73.62	40	36.69
Other--call ambulance, go to hospital ER	24	26.38	69	63.21
n = 200	91	100.00	109	100.00

$$\chi^2 = 25.723; p < .001$$

Tables 14 and 15 illustrate the differences in utilization patterns of the physician as a source of information and the first source of care when someone is sick.

Those that utilize general practitioners are significantly more likely to turn to one main source for health information or when someone first becomes ill than are those who utilize specialists. Those who go to a specialist for their primary ambulatory care are much more likely to answer that their source of information and the resource to whom they turn first when someone is ill depends on the problem. That is, they are exercising much more judgment about the problem than are those who utilize general practitioners.

TABLE 14

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
SOURCE OF INFORMATION OR ADVICE

Source Consulted	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Turn to main doctor	87	95.60	40	36.69
No main source	4	4.40	69	63.31
n = 200	91	100.00	109	100.00

$$\chi^2 = 71.732; p < .001$$

TABLE 15

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
FIRST SOURCE CONSULTED WHEN SICK

Source Consulted	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Main physician	89	97.80	30	27.22
No one source - depends on problem	2	2.20	79	72.47
n = 200	91	100.00	109	100.00

$$\chi^2 = 98.757; p < .001$$

Table 16 shows another aspect of utilization--the practice of a patient consulting a second physician without telling the first about it.

Again, those who utilize specialists exercise a greater amount of self-decision about medical problems than do those that utilize general practitioners.

TABLE 16

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
CONSULTATION WITH OTHER PHYSICIANS

Response	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Have consulted	9	9.89	33	30.27
No, have not	82	90.11	76	69.73
n = 200	91	100.00	109	100.00

$$\chi^2 = 13.681; p < .001$$

Table 17 reveals the method of referral to specialists. The n for those utilizing general practitioners is 76 here: this is the total number of those utilizing general practitioners who have, at some time, consulted a specialist. It is interesting to note that 79 or 72.47 per cent of those utilizing a specialist have consulted a specialist within this last year, while only 42.85 per cent (39) of those utilizing general practitioners have consulted a specialist within the last year. (This is significant beyond the .001 level.) In addition, 15 (16.48 per cent) of those who utilize general practitioners have never consulted a specialist at any time.

Those that utilize general practitioners are more likely to consult a specialist on the advice of a physician--usually their family physician. Only 14.47 per cent of those using general practitioners decide themselves to consult a specialist, while 37.62 per cent of those utilizing specialists have decided themselves to consult one.

TABLE 17

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
METHOD OF REFERRAL TO SPECIALISTS

Method	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
A physician	52	68.42	28	25.68
Family - friends	13	17.11	40	36.70
Decided self	11	14.47	41	37.62
n = 183	76	100.00	109	100.00

$$\chi^2 = 33.417; 4df; p < .001$$

A pattern of utilization presents itself: those that utilize general practitioners, while their attitudes are not significantly different from those who use specialists, do tend to utilize the general practitioner more as the "gatekeeper" to the rest of the medical care delivery system. They consult him for an emergency, they turn to him for information, they consult him first whenever someone is sick, they do not seek the opinion of a second physician unless they tell him first, and when they do consult a specialist, it is more often on the advice of their physician. The general practitioner, in other words, is the decision-maker. The responsibility for decision-making is not relegated by those that utilize specialists for ambulatory care: they decide, on the basis of their own evaluation of the problem, where to go for emergency care, who to turn to for advice, where to go when sick. They are more likely to take an active part in the diagnosis--they more frequently decide to consult a second physician without telling the first. When they do con-

sult a specialist, it is they, along with family and friends, who make the decision. This pattern of utilization is in agreement with the implications of White's study (White, 1964).

The classification of those who utilize general practitioners and those who utilize specialists is not without its problems. The division into the two groups is made on the basis of answers to questions found in Table 1 of Appendix A. Of the 91 who are classified as utilizing general practitioners, two physicians are actually specialists (both internists) but they are utilized as general practitioners, based on the scoring of the 10 items. Of those who are classified as using specialists, 46 (42.20 per cent) said that they do have a family doctor. Of the 46, 24 (52.17 per cent) identify this doctor as a general practitioner while the rest identify him as a specialist. However, based on their answers to the items of the Utilization Index, they do not utilize this physician as the "gate-keeper".

Of the 91 who are classified as utilizing a general practitioner, 45 (49.45 per cent) do use other physicians, but mostly on the recommendation of their main physician. In this group only 4 (4.39 per cent) have ever consulted a chiropractor, and there were none in the specialist group that had ever consulted a chiropractor. Most of those who utilize specialists have at least three doctors--most commonly a pediatrician, a gynecologist, and an internist. One family of four had seven different doctors--a pediatrician, an orthopedic specialist, a urologist, an internist, a dermatologist, a surgeon, and a gynecologist. One other family of three had five physicians that they regularly consulted.

Since the attitudes toward professional competence and personal physician-patient relationship are not significantly related to the type

of physician utilized, it is interesting to evaluate the importance of some other variables to see if any can be identified as being related to the type of physician selected for primary ambulatory care.

Table 18 illustrates the relationship of geographical area of residence on the type of physician utilized.

TABLE 18
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
AREA OF RESIDENCE

Area	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Northwest	45	49.45	55	50.45
Southwest	46	50.55	54	49.55
n = 200	91	100.00	109	100.00

$$\chi^2 = 0.080; p > .05$$

As is obvious, the area of residence has no effect upon the type of physician utilized. No very great differences appear in distances traveled by area either. Those that live in the Northwest area take a mean of one hour and forty minutes on an average visit; those in the Southwest part of town take an average of one hour and fifty minutes.

A variable that might be a determinant in the selection of a general practitioner or of a specialist for primary ambulatory care is that of age. The overall age distribution of the sample is as follows: 34 are in the age group 20-29 (17 per cent); 43 are in the 30-39 age group (21.50 per cent); 61 are in the 40-49 age group (35 per cent); 38 are in the 50-59 age group (14.50 per cent); and 24 are above 60 (12 per cent.) Table 19 shows the age distribution of those who utilize general practi-

tioners and those who utilize specialists.

TABLE 19
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY AGE

Age Groups	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
20 - 29	7	7.69	27	24.77
30 - 39	18	19.78	25	22.94
40 - 49	31	34.06	30	27.52
50 - 59	20	21.98	18	16.52
60 +	15	16.49	9	8.25
n = 200	91	100.00	109	100.00

$$\chi^2 = 13.00; 4df; p < .02$$

This table indicates that the patients who utilize specialists are a significantly younger group than those who utilize general practitioners. Of those that utilize general practitioners, 27 per cent are below the age of 39 while 47 per cent of those that utilize specialists are below age 39. Those that are younger may have larger families and therefore "need" the services of various specialists more, especially gynecologists and pediatricians. It is also logical to assume that those who are older would have more medical problems and thus require the services of specialists especially to deal with chronic diseases. Therefore, differences in age distribution probably do not reflect differences in medical needs of the family unit.

Table 20 explores the relationship of the age distribution by area of residence in Oklahoma City.

TABLE 20

AGE DISTRIBUTION BY AREA OF RESIDENCE

Area of Residence	Age			
	20 - 39		40 +	
	n	%	n	%
Northwest	33	42.86	67	54.47
Southwest	44	57.14	56	45.53
n = 200	77	100.00	123	100.00

$$\chi^2 = 3.04; p > .05$$

This result approaches significance at the 5 per cent level. There may be a slight tendency for the Northwest sample to be somewhat older than the Southwest sample.

Age is a significant variable in that those who utilize specialists are younger than those who utilize a general practitioner for their medical needs. This agrees with Litman's study conducted on three-generational families that concluded that the youngest of the generations was more likely to utilize multiple specialist physicians than was the oldest generation (Litman, 1971).

Another variable of interest in the selection of either a specialist or a general practitioner for primary care is that of social class. Table 21 illustrates the social class distribution of those who utilize specialists and those who utilize general practitioners.

Although not significant, the data does reveal a slight tendency for a higher percentage of those in Classes I and II to utilize specialists and for those in Classes III and IV to utilize general practitioners. While this supports the popular notion that those in higher social classes

tend to utilize specialists more, it was felt that the design of the present study controlled social class differences by sampling within middle-class areas of Oklahoma City. Despite this precaution, however, it seems that some social class differences do exist.

TABLE 21
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE
BY SOCIAL CLASS

Social Class	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
I - II	15	16.48	28	25.69
III - IV	76	83.52	81	74.31
n = 200	91	100.00	109	100.00

$$\chi^2 = 3.064; p > .05$$

The social class distribution of the entire sample is of interest; four people are classified as I (2.00 per cent); a total of 39 are placed in Class II (19.50 per cent); 115 are in Class III (57.50 per cent;) and 42 are in Class IV (21.00 per cent). Because of the geographical area selected for the sample, the social class distribution was expected to be largely within Class III, as it is. However, more Class IV and fewer Class II were found than expected. Seventy-eight per cent of the total sample is in Classes III and IV. Table 22 illustrates that there is no significant relationship of social class to the area of residence.

A variable that is difficult to quantify is that of medical need. A family's medical needs are hard to assess accurately; their perception of medical need is likely to be far different from a physician's assessment of medical need. A crude way to get an indication of medical need

may be the self-assessment of state of health. The respondents were asked to rate their own health as poor, fair, average, above average or excellent. Table 23 shows the relationship of this health rating to the type of physician utilized for primary care.

TABLE 22
SOCIAL CLASS BY AREA OF RESIDENCE

Area of Residence	Social Class			
	I - II		III - IV	
	n	%	n	%
Northwest	23	53.49	77	49.04
Southwest	20	46.51	80	50.96
n = 200	43	100.00	157	100.00

$$\chi^2 = 0.118; p > .05$$

TABLE 23
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY HEALTH RATING

Health Rating	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Poor	6	6.59	5	4.58
Fair	8	8.79	15	13.76
Average	32	35.16	31	28.44
Above Average	31	39.07	36	33.04
Excellent	14	15.39	22	20.18
n = 200	91	100.00	109	100.00

$$\chi^2 = 2.790; df = 4; p > .05$$

As seen from this table there is no relationship between health rating and the type of physician utilized for primary care.

Table 24 shows that age has a significant effect upon the health rating with both the age groups and the health ratings collapsed for analysis. As might be predicted, those who rate their health as either above average or excellent are younger than those who rate their health as average or below. Of those that are 39 or below, 60 per cent rank their health as above average or excellent, while only 44 per cent of those over 40 rank their health this high.

TABLE 24
AGE BY HEALTH RATING

Health Rating	Age Group			
	20 - 39		40 +	
	n	%	n	%
Average or below	31	40.25	68	55.28
Above Average or Excellent	46	59.75	55	44.72
n = 200	77	100.00	123	100.00

$$\chi^2 = 4.89; p < .05$$

Table 25 illustrates the effect of the health rating of the respondent upon frequency of physician visits of the family unit within the last year.

This table reveals no difference in frequency of physician visits of the family unit according to the health rating of the respondent.

Table 26 shows the same data collapsed for analysis in a two by two table.

TABLE 25

FREQUENCY OF PHYSICIAN VISITS WITHIN THE LAST
YEAR BY HEALTH RATING (I)

Health Rating	Frequency of Physician Visits							
	0 - 5		6 - 10		11 - 15		16 +	
	n	%	n	%	n	%	n	%
Poor - Fair	9	12.50	8	14.81	9	20.45	8	26.67
Average - Above Average	50	69.44	37	68.52	26	59.09	17	56.66
Excellent	13	18.06	9	16.67	9	20.46	5	11.67
n = 200	72	100.00	54	100.00	44	100.00	30	100.00

$$\chi^2 = 4.07; df = 6; p > .05$$

TABLE 26

FREQUENCY OF PHYSICIAN VISITS WITHIN THE LAST
YEAR BY HEALTH RATING (II)

Health Rating	Frequency			
	0 - 10		11 +	
	n	%	n	%
Poor - Fair	17	13.49	17	22.97
Average to Excellent	109	86.51	57	77.03
n = 200	126	100.00	74	100.00

$$\chi^2 = 3.679; p > .05$$

This is very close to the 5 per cent level. As would be expected, those with higher health ratings visited their physicians somewhat less frequently. However, the health rating is that of the female respondent and the frequency is the number of visits of the total family unit. The strength of significance is not enough to state whether the

health of the woman of the house affects the health of the entire family unit, although this type of relationship would not be totally unexpected.

Table 27 shows the relationship of frequency of visits within the last year to the type of physician utilized.

TABLE 27

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY FREQUENCY
OF PHYSICIAN VISITS WITHIN THE LAST YEAR

Frequency	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
0 - 5	40	43.97	32	29.36
6 - 10	27	29.67	27	24.77
11 - 15	15	16.48	29	26.61
16 +	9	9.88	21	19.26
n = 200	91	100.00	109	100.00

$$\chi^2 = 8.589; df = 3; p < .05$$

As can be seen from the table, those that utilize specialists tend to go to their physician significantly more often than those that use general practitioners. This phenomenon is not related to medical needs, as measured by the health rating of the respondent, but may be related to the medical needs of the whole family. This relationship could be related to the amount of preventive care that a specialist or general practitioner gives. However, item ten on the Thurstone scale measuring professional competence deals with the attitudes of the patient toward the amount of preventive medicine practiced by the physician, and there were no differences between groups on that item. Frequency may also be related to the age of the respondent, which is shown in Table 28.

TABLE 28

AGE BY FREQUENCY OF PHYSICIAN VISITS WITHIN THE LAST YEAR

Frequency	Age Group			
	20 - 39		40 +	
	n	%	n	%
0 - 10	35	45.45	91	73.98
11 - 20	29	37.66	26	21.13
21 - 31	13	16.89	6	4.89
n = 200	77	100.00	123	100.00

$$\chi^2 = 18.00; df = 2; p < .001$$

From Table 28, it is obvious that the age of the respondent is significantly related to the frequency of physician visits of the entire family unit per year. The direction of this relationship is interesting. Of those in the 20 to 39 age group, 45 per cent of the families go to the physician ten or fewer times; while those in the 40 and above age group, 73 per cent go to their physician ten or fewer times. A larger percentage of those in the younger group go to their physicians over 21 times than in the older group. This would imply that another variable is at work here--age and size of the household. Those respondents that are in the 20 to 39 age group may be more likely to have children in the home that require visits to the physician, either for routine examinations or for the many childhood emergencies that arise. Table 29 explores the relationship between frequency of physician visits and household size. Household size is the number of persons living in the same household. This illustrates that household size is related to the frequency of physician visits within the last year. Larger families do tend to visit their

physicians more often. This relationship is not analyzed per person. It is very likely that this is reflective only of the fact that more persons in a family unit tend to visit a physician more often than fewer people.

TABLE 29

HOUSEHOLD SIZE BY FREQUENCY OF PHYSICIAN VISITS
WITHIN THE LAST YEAR

Frequency	Household Size			
	1 - 3		4 - 6 +	
	n	%	n	%
0 - 10	95	79.17	31	38.75
11 - 20	20	16.67	35	43.75
21 +	5	4.16	14	17.50
n = 200	120	100.00	80	100.00

$$\chi^2 = 34.22; df = 2; p < .001$$

Since larger families do utilize the services of the physician more, it would be interesting to know whether household size has an effect upon the type of physician selected for primary care. Table 30 illustrates the relationship. If the cells are combined into a two by two table, the probability value does not increase in significance. Although younger families tend to utilize their physician more and tend to go to specialists more, there does not seem to be any relationship of household size to the type of physician selected for primary care.

In this sample, then attitudes of those utilizing specialists and those utilizing general practitioners were not significantly different. However, those that choose to utilize general practitioners do tend to be somewhat older, to have a slightly lower socioeconomic status, and to visit their physician less often.

TABLE 30

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE
BY HOUSEHOLD SIZE

Family Size	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
1	7	7.69	7	6.42
2	34	37.35	25	22.94
3	21	23.07	29	26.60
4	17	18.67	24	22.02
5 +	12	13.22	24	22.02
n = 200	91	100.00	109	100.00

$$\chi^2 = 6.27; df = 4; p > .05$$

Table 6 in Appendix A reveals some other factors that influence people in the selection of a physician. Table 31 illustrates the relationship of physician utilized to three factors important in the selection of a physician. These three factors are the ones that Mechanic's sample listed as most important: for purpose of analysis here, the last two factors have been combined, since they both deal with the personal relationship aspect of the physician-patient interaction.

As can be seen, the overwhelming majority of the total sample said that they would select a physician on the basis of competence rather than on any personal relationship criteria. It is noteworthy that not only do 80 per cent of the total sample select competence as the most important quality of a physician, there are no differences between the two groups. It was expected that those who utilize general practitioners would place

a much higher value on personal relationships than those who utilize specialists.

TABLE 31

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY QUALITY
CONSIDERED MOST IMPORTANT IN A DOCTOR

Quality	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Competent - qualified	78	85.71	97	88.99
Personal interest - way he behaves	13	14.29	12	11.01
n = 200	91	100.00	109	100.00

$$\chi^2 = 0.832; p > .05$$

Table 32 illustrates a more complete list of items that respondents considered in selecting a physician (Appendix A, Table 9). This question of important characteristics considered in selecting a physician was asked as an open-ended question, with the interviewer marking down the answers that were given. There are four items indicated by this sample that were not on Mechanic's list. Also, the percentages in Table 32 do not add up because the respondent was free to answer more than one item.

There is only one significant difference on these items and that is the item dealing with method of referral, which has been discussed previously. The direction of the difference is the same here: those who utilize specialists are much more likely to select a physician on the basis of recommendations by their friends and family. This indicates that those who utilize specialists take a greater part in the decision-making process of seeking medical care than do those who utilize general practitioners.

TABLE 32

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY CHARACTERISTICS CONSIDERED IN SELECTING A PHYSICIAN

SELECTION ITEMS	ITEMS MENTIONED					
	Physician Utilized				χ^2	p
	G. P. n = 91 n %		Specialist n = 109 n %			
1. Competent, qualified (knows what he is doing).	63	69.23	77	70.64	0.138	NS
2. Takes a personal interest in the patient.	26	28.57	26	23.85	0.354	NS
3. Way the doctor behaves (thoughtful, sympathetic, etc.)	12	13.18	12	11.00	0.064	NS
4. Makes house calls.	2	2.19	1	0.91	*	
5. Tells the patient the truth.	7	7.69	11	10.09	0.703	NS
6. Gives the patient sufficient time.	5	5.49	13	11.92	3.352	NS
7. Way the doctor proceeds (reliable, etc.).	9	9.89	10	9.17	0.004	NS
8. Is available when you need him.	6	6.59	13	11.92	2.319	NS
9. Explains things so patient understands.	10	10.98	5	4.58	2.079	NS
10. Listens to the patient.	6	6.59	7	6.42	0.057	NS
11. Recommendation by friends, family - reputation.	27	29.67	53	48.62	8.234	<.01
12. Location.	9	9.89	8	7.33	0.151	NS
13. The type of doctor or type of practice - group practice.	5	5.49	5	4.58	.001	NS
14. Other - waiting time, fees, good with kids, Christian, phone book.	12	13.18	8	5.54	1.290	NS

* Expected number is less than 5 per cell; chi square not applicable.

Although this item was not on Mechanic's original list, 40 per cent of the total sample mentioned this as important in selecting a physician.

There seems to be the suggestion of some other differences but they are not statistically significant. Item 6, which is close to the 5 per cent level, is of interest in that it suggests that those who utilize specialists feel that the amount of time the physician spends with a patient is an important factor to consider in selection. However, to the whole sample this is not critical, since fewer than 10 per cent of the sample mention it. On two other items, 8 and 9, some very small differences are observed, although again a small proportion of the total sample mentioned these factors.

For the entire sample, the most important factor mentioned was competence. Seventy per cent indicated this as an important factor. The next largest response is on the item dealing with recommendations of family and friends, which 40 per cent of the respondents mentioned. Twenty-five per cent mention that it is important that a doctor take a personal interest in the patient.

Table 33 compares the results of this study with Mechanic's 1962 study of Wisconsin mothers reported in 1968. One of the more interesting differences is the wide margin on the item pertaining to house calls. This may be a function of the time span between 1962 and 1972. House calls are much less important to the Oklahoma City sample than to the Madison sample. A larger proportion of the Oklahoma City sample stress competency and a smaller proportion stress personal interaction and the physician's behavior. These differences are more striking if the total response of this sample is compared to Mechanic's sample. Seventy per cent of the Oklahoma City sample mention competence while only 45 per cent of Mechanic's sample

TABLE 33

CHARACTERISTICS CONSIDERED IN SELECTING A PHYSICIAN: COMPARISON
OF RESPONSES WITH MECHANIC'S STUDY (MECHANIC, 1968)

ITEMS	MECHANIC PER CENT RESPONSE	G. P. PER CENT RESPONSE	SPECIALIST PER CENT RESPONSE	TOTAL PER CENT RESPONSE
	n = 350	n = 91	n = 109	n = 200 n %
1. Competent, qualified.	45.00	69.23	70.64	140 70.00
2. Takes personal interest in patient.	41.00	28.57	23.85	52 26.00
3. Way doctor behaves (thoughtful, sympathetic, etc.)	37.00	13.18	11.00	24 12.00
4. Makes house calls.	21.00	2.19	0.91	3 1.50
5. Tells the patient the truth.	19.00	7.69	10.09	18 9.00
6. Gives patient sufficient time.	17.00	5.49	11.92	18 9.00
7. Way the doctor proceeds (reliable, etc.).	16.00	9.89	9.17	19 9.50
8. Is available when you need him.	15.00	6.59	11.92	19 9.50
9. Explains things so the patient understands.	14.00	10.98	4.58	15 7.50
10. Listens to the patient.	12.00	6.59	6.42	13 6.50

mention this. On the other hand, only 26 per cent of the Oklahoma City sample mentions the doctor taking a personal interest in the patient as important, while 41 per cent of Mechanic's sample mention this. These differences may represent important time trends within the last four years, in that people are increasingly aware of competency and expect less personal interaction than at previous times.

Therefore, despite the fact that the null hypothesis is not rejected that there are no differences in attitudes between those who utilize specialists and those who utilize general practitioners, there are some significant differences in the utilization patterns of those who go to specialists and to general practitioners and in other secondary factors such as age, social class, and frequency.

Hypothesis II

Hypothesis II was rejected and the alternate accepted, as described in Chapter V. This indicates that the utilization of a specialist for primary ambulatory care is related to a less positive image of the general practitioner.

Two scales are used to measure this, which are found in Appendix A, Tables 4 and 5.

On both of these scales, the measurement is biased toward the general practitioner. The Task Preference Scale measures the tasks that are considered appropriate for a general practitioner. The Characteristics Scale indicates those qualities that are viewed as exhibited by general practitioners more than specialists. The higher the score on both scales, the more positive the image of the general practitioner.

Appendix D lists the actual scores of the respondents. On both

scales, the score of 0 is evident, especially among those who utilize specialists. The meaning of a 0 score is that these respondents do not prefer a general practitioner to do any task nor do they recognize that a general practitioner has some qualities that a specialist does not have. These respondents who score 0 have an extremely strong view of the difference between general practitioners and specialists. It is also noteworthy to recall that of those who utilize general practitioners, the mean score on the Task Preference Scale is 0.721 and the mean score on the Characteristics Scale is 0.684. Both of these scores are much higher than the respective scores of those utilizing specialists, 0.406 and 0.421.

Table 34 shows the results of an item analysis on the first of these scales, the Task Preference Scale.

There are significant differences on every item except one where the chi square test is applicable. On the item pertaining to surgery, which is nonsignificant, the majority of the sample indicate that this is the domain of a specialist. Only 10 per cent of the total sample are willing to appropriate this task to a general practitioner. Of those who believe that a general practitioner can do surgery, 14 per cent use general practitioners and only 5 per cent use specialists. On every item, those that utilize specialists relegate fewer tasks to the general practitioner. Of those who utilize general practitioners, the percentage assigning tasks to the general practitioner becomes smaller as the tasks become more complicated with surgery eliciting the fewest replies for the general practitioner. On the item pertaining to helping work out a personal problem, of those who utilize general practitioners, six people (6.59 per cent) stated that they would prefer a source other than a physician, usually choosing a minister. Of those who utilize specialists, 17

TABLE 34

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY TASKS CONSIDERED
APPROPRIATE FOR A GENERAL PRACTITIONER

TASKS	TASKS RELEGATED TO THE G.P.					
	Physician Utilized				χ^2	p
	G. P. n = 91 n %		Specialist n = 109 n %			
1. Explain results of tests.	64	70.32	36	33.02	26.131	<.001
2. Explain what is wrong with the patient.	72	79.12	43	39.44	30.337	<.001
3. Give a shot.	90	98.90	82	75.22	*	
4. Examine the throat.	76	83.51	60	55.04	17.189	<.001
5. Explain results of x-ray exams.	67	73.62	36	33.02	31.122	<.001
6. Instruct on a special diet.	82	90.10	65	59.63	22.111	<.001
7. Explain how and why to take medicine.	87	95.60	69	63.30	*	
8. Give a general physical exam.	84	92.30	71	65.13	19.466	<.001
9. Decide when you should go to the hospital.	58	63.73	39	35.77	14.419	<.001
10. Give a routine exam to children, including shots.	77	84.61	48	44.03	33.133	<.001
11. Perform tests, such as PAP smear, EKG, etc.	52	57.14	25	22.93	23.086	<.001
12. Give a prescription for an illness.	85	93.40	75	68.80	17.250	<.001
13. Set a broken bone.	40	43.95	18	16.15	16.831	<.001
14. Care for a chronic disease, such as heart trouble or diabetes.	20	21.97	4	3.66	*	
15. Do surgery.	13	14.28	6	5.55	3.485	NS
16. Help you work out some personal problem.	71	78.02	52	47.70	17.991	<.001
17. Diagnose your symptoms and decide what's wrong with you.	77	84.61	38	34.86	48.221	<.001

* Expected frequency less than 5 per cell; χ^2 not applicable.

(15.59 per cent) indicate they would not want to consult a physician in regard to a personal problem. In addition, those who utilize specialists indicate on items three and seven that this task should be delegated to a nurse. The numbers are small, with 7 (6.42 per cent) replying this for item number three and only 2 (1.83 per cent) on item number seven, but nevertheless, none of those utilizing general practitioners made this observation. Therefore, it might seem that those who utilize specialists for primary ambulatory care are more accustomed to the whole concept of specialization of task responsibilities than are those who utilize general practitioners.

Seven of the items on the Task Preference Scale are from Lewis and Resnik (1967) who studied patient preference for utilizing a physician or a nurse for a particular task. Their most important finding was that patient preference changed on seven items after having contact with a nurse who performed these tasks traditionally thought of as appropriate for physicians. On the items regarding explaining results of tests, explaining what is wrong with the patient, giving shots, examining the throat, explaining results of x-ray exams, instructing on a special diet, and explaining how to take medicine, patient preference significantly changed from that of physician to nurse. On these 7 items, at least 70 per cent of those in this sample who utilize general practitioners appropriate the tasks to a general practitioner. Of those who utilize specialists, the percentages range from only 33 per cent to 45 per cent who will relegate this task to a general practitioner. It may be that utilization of specialists leads to a more narrow definition of what tasks really are appropriate for a general practitioner. As Lewis and Resnik have shown, patients can be trained to understand the competency level of various

health professionals.

The second scale used to measure the image of the general practitioner is the Characteristic Scale reported by Cahal. Table 35 shows the item analysis of this scale. The one item where there is not a significant difference is in itself surprising: 75 per cent of both groups view the specialist as more competent than the general practitioner. Also, only about 15 per cent of both groups view the general practitioner as being able to keep up with the latest developments in his field. This provides a contrast to the previous discussion of important selection factors of a physician. Both groups use competence as the main criterion for selection of a physician and yet those who utilize a general practitioner view him as less competent than a specialist. However, around 70 per cent of both groups view the general practitioner as taking a more personal interest in the patient, as treating each person as a human being, as glad to help in an emergency situation, as more fair in prices and fees, as making one feel better just by talking to him and as trying to prevent illness as well as cure it. Clearly, for this sample these characteristics are not considered essential for competency.

The differences between groups are significant on every item except the one dealing with competency. Those who utilize specialists have a less positive image of the general practitioner. However, despite these differences when both groups are taken together, the general practitioner is more frequently named on most of the items as possessing a given characteristic. Cahal reported the results of a National Opinion Research Corporation (NORC) survey which utilized the same ten items (Cahal, 1963). Table 36 compares the results of that survey with the present study. It is important to note that in Table 35 the percentages recorded are those

TABLE 35

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY CHARACTERISTICS
ATTRIBUTED TO A GENERAL PRACTITIONER

CHARACTERISTICS	ATTRIBUTING CHARACTERISTICS TO THE G.P.					
	Physician Utilized				χ^2	p
	G. P. n = 91 n %		Specialist n = 109 n %			
1. Takes a personal interest in each patient.	82	90.10	61	55.96	26.727	<.001
2. Sincerely devoted to his work.	53	58.24	35	32.11	12.704	<.001
3. Treats each person as a human being.	87	95.60	74	67.88	*	
4. Really glad to help in an emergency.	76	83.51	68	62.38	9.961	<.001
5. Fair in prices and fees.	83	91.20	82	75.22	7.699	<.01
6. Competent.	29	31.86	24	22.01	1.990	NS
7. Makes one feel better just by talking to him.	75	82.40	59	54.12	16.694	<.001
8. Explains everything thoroughly.	52	57.14	29	26.60	17.946	<.001
9. Tries to keep up with the latest developments in his field.	22	24.17	8	7.33	9.745	<.01
10. Tries to prevent illness as well as cure it.	83	91.20	65	59.63	24.085	<.001

* Expected frequency less than 5 per cell; χ^2 not applicable.

TABLE 36

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY CHARACTERISTICS ATTRIBUTED
TO THAT PHYSICIAN: COMPARISON WITH CAHAL, 1963

ITEM	FROM CAHAL		PRESENT STUDY	
	PHYSICIAN A GENERAL PRACTITIONER PER CENT n = 392	PHYSICIAN A SPECIALIST PER CENT n = 26	PHYSICIAN A GENERAL PRACTITIONER PER CENT n = 91	PHYSICIAN A SPECIALIST PER CENT n = 109
1. Takes a personal interest in each patient.	69	82	90.10	44.04
2. Sincerely devoted to his work.	66	82	58.24	67.89
3. Treats each person as a human being.	61	67	95.60	32.12
4. Really glad to help in an emergency.	60	78	83.51	37.62
5. Fair in prices and fees.	59	59	91.20	24.78
6. Competent.	55	78	31.86	77.99
7. Makes one feel better just by talking to him.	48	63	82.40	45.88
8. Explains everything thoroughly.	48	37	57.14	73.40
9. Tries to keep up with the latest developments in his field.	46	69	24.17	92.67
10. Tries to prevent illness as well as cure it.	45	59	91.20	40.37

that attributed the characteristics to the general practitioners. For comparison purposes in Table 36, the percentages are those that attributed the characteristic to a specialist or a general practitioner.

The specialist seems to have a more favorable image than the general practitioner according to NORC's data. In both studies, the competence of the general practitioner is not viewed very positively by either group, but especially not by those who utilize specialists. In the Oklahoma City sample, the general practitioner seems to have a somewhat better image, except in the area relating to competency and keeping up with the latest developments in his field. These differences are not easily explained by the passage of time--ten years would seem to add to the image of the specialist rather than to the image of the general practitioner. The NORC report had an extremely small sample size of those utilizing specialists; only 26. Although the image of the general practitioner in the Oklahoma City sample seems more positive, the positiveness is in the area of personal relationship, not in the area of professional competence. Even of those who utilize general practitioners, only 31 per cent rank the general practitioner above the specialist in the area of competency.

Appendix H is a table showing the relationship of the scores on these two scales. At lower scores on the Task Delegation Scale the score on the Characteristic Scale is higher. At higher scores on the Task Delegation Scale, the Characteristic Scale is lower. There seems to be some inconsistency in the two dimensions of measuring the image of the general practitioner.

From this analysis, it is clear that those who utilize specialists have a lower regard for general practitioners than do those who utilize general practitioners for primary care. However, in the critical

area of competency, even those who utilize general practitioners rank them below specialists. In areas other than professional competency, however, both groups tend to rate the general practitioner above the specialist on the Characteristic Scale.

Hypothesis III

Hypothesis III, dealing with perceived medical knowledge, was rejected and the alternate accepted, as described in Chapter V. Therefore, it is concluded that utilization of a specialist for primary ambulatory care is associated with greater perceived medical knowledge.

The scale used to measure this is a modification of Grubb's scale (Grubb, 1970). Table 37 shows the results of an item analysis for each of the ten items on the scale.

There are significant differences on only two items. People who use specialists answer "don't know" less frequently than do those who utilize general practitioners on the item pertaining to symptoms of a coronary thrombosis. In addition, a greater percentage either know the correct answer or think they know the answer. In light of those who utilize general practitioners being an older group, it would seem likely that they would be more aware of the symptoms of a coronary thrombosis than those that utilize specialists. Significant at the 5 per cent level is the item relating to diabetes: significantly more who utilize specialists make a correct response than do those who utilize general practitioners. Item nine, dealing with the knowledge of stomach ulcers, is close to the significance level. In this case, more general practitioner-users know the correct answer, but more of them also admit that they do not know. Eighty per cent of those who utilize specialists know either the correct answer or mention

TABLE 37

ITEM ANALYSIS OF PERCEIVED MEDICAL KNOWLEDGE BY TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

ITEM	PHYSICIAN UTILIZED				df	χ^2	p
	G. P. n = 91 n %		Specialist n = 109 n %				
1. Tuberculosis of the lungs is due to: 2. Infection with a germ 1.& 3. Prolonged exposure/Anemia & vitamin deficiency 4. Don't know	61	67.03	86	78.89	2	3.909	NS
	7	7.70	7	6.43			
	23	25.27	16	14.68			
2. A stroke is: 3. Hemorrhage or blood clot in brain 1.& 2. Blood clot in heart/Blood clot in arms 4. Don't know	61	67.03	75	68.81	2	1.036	NS
	8	8.79	13	11.93			
	22	24.18	21	19.26			
3. Most common symptom of a stroke: 2. Paralysis 1.& 3. Chest pain/Rapid heart beat 4. Don't know	48	52.75	64	58.71	2	2.408	NS
	17	18.68	24	22.02			
	26	28.57	21	19.27			
4. Most common symptom of coronary thrombosis: 3. Steady pain in chest 1.& 2. Rapid heartbeat/Paralysis 4. Don't know	60	65.93	81	74.32	2	12.312	<.01
	6	6.59	17	15.59			
	25	27.48	11	10.09			
5. Arthritis is condition in which: 1. Joints are painful, swollen, etc. 2.3.& 4. Stiff, useless/Nerves/Don't know	80	87.92	102	93.58	1	1.313	NS
	11	12.08	7	6.42			
6. Diabetes is: 3. More common in people who are overweight 1.& 2. Contagious/Due to poorly-functioning liver 4. Don't know	61	67.03	77	70.64	2	1.068	NS
	9	9.89	13	11.93			
	21	23.08	19	17.43			

TABLE 37--Continued.

ITEM	PHYSICIAN UTILIZED				df	χ^2	P
	G. P. n = 91 n %		Specialist n = 109 n %				
7. Asthma is:							
2. Wheezing & difficulty in breathing	86	94.54	106	97.24			
1.3.& 4. Severe cold/Pneumonia/Don't know	5	5.46	3	2.76	*	*	
8. Leukemia is:							
1. Cancer-like condition	79	86.81	95	87.16			
2.3.& 4. Severe infection/Iron deficiency/ Don't know	12	13.19	14	12.84	1	0.080	NS
9. Persons with stomach ulcers:							
3. Pain relieved by eating	38	41.76	37	33.94			
1.& 2. Cramps & diarrhea/Pain after eating	29	31.87	51	46.79			
4. Don't know	24	26.37	21	19.27	2	4.678	NS
10. Most likely to get diabetes:							
2. Have relatives with diabetes	72	79.12	99	90.83			
1.3.& 4. Underweight/Eat too much sugar/Don't know	19	20.88	10	9.17	1	4.577	<.05

* Expected frequency less than 5 per cell; χ^2 not applicable.

an incorrect choice, while 72 per cent of those that utilize general practitioners signify that they know the correct response.

Table 38 shows these same responses put in two by two chi square tables. Since perception of knowledge is conceived of here as more important than the objective correctness of the answer, it is useful to view all responses (whether correct or incorrect) in contrast to the "don't know" responses.

On the items pertaining to leukemia and stroke, those that use specialists score higher, although the differences are not statistically significant. Specialist-users score significantly higher than general practitioner-users on the item pertaining to tuberculosis and coronary thrombosis. On the other items, those who utilize specialists score higher than those who utilize general practitioners, but these are not significant differences. Therefore, those that utilize specialists do seem to have a somewhat greater degree of perceived medical knowledge. Table 39 further explores the scientific accuracy of this knowledge.

Those that utilize specialists have significantly more correct knowledge about tuberculosis and diabetes. The only other item that has any differences is the one dealing with arthritis: 93 per cent of those who use specialists know the correct response while 87 per cent of those who use general practitioners know the correct response. These differences are not significant, however. Those that utilize specialists do not seem to have a great deal more correct knowledge on these medical conditions, but they do seem to have a greater degree of perceived knowledge that is a basis for their health behavior.

The total sample is a well-educated one. On only one item do the number of correct responses fall below 50 per cent and that is on the item

TABLE 38

ITEM ANALYSIS OF THE PERCEIVED MEDICAL KNOWLEDGE SCALE COMPARING ANY RESPONSE
TO DON'T KNOW BY TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

ITEM	PHYSICIAN UTILIZED				χ^2	p
	G. P. n = 91 n %		Specialist n = 109 n %			
1. Tuberculosis of the lungs is due to: All responses Don't know	68	74.72	93	85.32	4.254	<.05
2. A stroke is: All responses Don't know	69	75.82	88	80.73	1.029	NS
3. Most common symptom of a stroke: All responses Don't know	65	71.43	88	80.73	2.934	NS
4. Most common symptom of a coronary thrombosis: All responses Don't know	66	72.53	98	89.91	11.362	<.001
5. Arthritis is a condition in which: All responses Don't know	85	93.41	106	97.25	*	
6. Diabetes is: All responses Don't know	70	76.92	90	82.57	1.372	NS
7. Asthma is: All responses Don't know	87	95.60	106	97.25	*	
8. Leukemia is: All responses Don't know	82	90.11	104	95.41	3.034	NS
9. Persons with stomach ulcers: All responses Don't know	67	73.63	88	80.73	1.873	NS
10. Most likely to get diabetes: All responses Don't know	85	93.41	105	96.33	1.614	NS

* Expected frequency less than 5 per cell; χ^2 not applicable.

TABLE 39

ITEM ANALYSIS OF PERCEIVED MEDICAL KNOWLEDGE SHOWING CORRECT ANSWERS
BY TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

ITEM	PHYSICIAN UTILIZED				χ^2	p
	G. P.		Specialist			
	n	%	n	%		
1. Tuberculosis of the lungs is due to: infection with a germ	61	67.03	86	78.90	4.220	<.05
2. A stroke is: hemorrhage or blood clot in the brain	61	67.03	75	68.81	0.176	NS
3. Most common symptom of a stroke: paralysis	48	52.75	64	58.72	0.979	NS
4. Most common symptom of coronary thrombosis: steady pain in chest	60	65.93	81	74.31	2.100	NS
5. Arthritis is a condition where: joints are painful and swollen	80	87.91	102	93.58	2.697	NS
6. Diabetes is: more common in people who are overweight	61	67.03	77	70.64	0.494	NS
7. Asthma is: wheezing and difficulty in breathing	86	94.51	106	97.25	*	
8. Leukemia is: a cancer-like infection	79	86.81	95	87.16	0.080	NS

TABLE 39--Continued.

ITEM	PHYSICIAN UTILIZED				χ^2	p
	G. P.		Specialist			
	n	%	n	%		
9. Persons with stomach ulcers: have pain relieved by eating	38	41.76	37	33.94	0.979	NS
10. Most likely to get diabetes: relatives with diabetes	73	79.12	99	90.83	6.465	<.02

* Expected frequency less than 5 per cell; χ^2 not applicable.

dealing with stomach ulcers. In the rural Oklahoma community of Wakita study by Grubb, the mean response was 13.3 (Grubb, 1970); the mean score of both groups in this study is 15.86. In the Wakita study, 49 per cent correctly identified paralysis as the most common symptom of a stroke while 56 per cent of the Oklahoma City sample cite this. About 62 per cent of both samples do not know that the abdominal pain associated with ulcers is often relieved by eating. In the urban Oklahoma City sample, 85 per cent know that people who have relatives with diabetes are more likely to develop diabetes; the Wakita figure for this is 58 per cent. Grubb notes that a great many in Wakita responded that those who eat too much sugar are likely to develop diabetes. In the urban sample, however, only 9.5 per cent of the total sample mention this. Both samples are generally aware of the etiology of tuberculosis: 69 per cent of the Wakita respondents and 73 per cent of the Oklahoma City sample know that tuberculosis is caused by infection with a germ. Sixty-four per cent of the Wakita residents know that a stroke is a hemorrhage or blood clot in the brain, while 68 per cent of Oklahoma City respondents know this. On the question pertaining to arthritis, 88 per cent of Wakita respondents and 91 per cent of Oklahoma City respondents answered correctly. Ninety-one per cent of Wakita residents and 96 per cent of Oklahoma City residents are aware that asthma is a condition in which there is wheezing and difficulty in breathing. Leukemia is correctly identified as a cancer-like condition by 80 per cent in the Wakita study and 87 per cent of the Oklahoma City study. The people making up the urban sample, as would be expected, appear to be slightly more educated than those of the rural Oklahoma sample.

Grubb found a significant relationship between age and medical knowledge, with the number of correct responses decreasing with increasing

age. Table 40 shows the relationship of age to score on the perceived medical knowledge for this sample.

TABLE 40
AGE BY SCORES ON PERCEIVED MEDICAL KNOWLEDGE SCALE

Score	Age Group			
	20 - 39		40 +	
	n	%	n	%
0 - 12	10	12.99	27	21.95
13 - 16	25	32.47	25	20.32
17 - 20	42	54.54	71	57.73
n = 200	77	100.00	123	100.00

$$\chi^2 = 4.937; df = 2; p > .05$$

As with Grubb's data, increasing age seems to be related to lower scores on perceived medical knowledge. Eighty-seven per cent of those under 39 scored above 16 while only 78 per cent of those over 40 scored above 16. Nonetheless, these differences are not significant.

Another form of medical knowledge is the patient's perception of what is wrong with him. Some studies have cited increasing amounts of self-diagnosis as an important influence on the type of physician selected by the patient (New Medical Materia, 1963, p. 18). Of those who utilize general practitioners, 61.53 per cent respond that they generally know what is wrong with them when they go to the doctor and 80 per cent of these note further that this knowledge helps them decide which physician is most appropriate for them to consult. Of those that use specialists, 72.48 per cent respond that they know what is wrong with them when they go to the physician and 89 per cent note that this helps them decide which physician

to consult. Table 41 illustrates these differences.

The mean score on perceived medical knowledge does not seem to be related to knowledge of the medical problem. Those that use general practitioners and know what their problem is have a mean score of 15.16 while those that do not usually know what is wrong have a mean score of 15.40. Those that use specialists and know what is wrong with themselves have a mean score of 16.46 while those that do not generally know what is wrong with themselves have a mean score of 16.30. While the specialist-users do seem to have higher scores, there is no relationship between the score on perceived medical knowledge scale and the patient's admission of knowledge of his medical problem.

TABLE 41

TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE
BY KNOWLEDGE OF MEDICAL PROBLEM

Response	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
Yes, know what's wrong	56	61.53	79	72.48
No, don't know what's wrong	35	38.47	30	27.52
n = 200	91	100.00	109	100.00

$$\chi^2 = 3.226; p > .05$$

Another aspect of medical knowledge that relates especially to the perception of knowledge is the phenomenon of self-diagnosis, where the patient decides what is wrong with himself on the basis of his symptoms and his medical knowledge. The question above is an attempt to measure this. In addition, six other agree-disagree items are asked in a further

attempt to quantify the amount of self-diagnosis. This scale is found in Table 8 of Appendix A. The scores run from 0 to 4, with the mean of both groups around 0.84. Appendix I shows the distribution of the actual scores. Table 42 illustrates the fact that there is no relationship between the scores on the items pertaining to self-diagnosis and the physician utilized.

TABLE 42
TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE BY
SCORES ON SELF-DIAGNOSIS SCALE

Score	Physician Utilized			
	General Practitioner		Specialist	
	n	%	n	%
0	33	36.26	42	38.53
1	43	47.25	46	42.20
2 +	15	16.49	21	19.27
n = 200	91	100.00	109	100.00

$$\chi^2 = 0.563; p > .05$$

Table 43 shows the result of an analysis of the six individual items.

As can be seen from Table 43, none of the six items show a difference between groups; in fact, the items show little variability themselves. The total sample either agrees with the item (numbers 3, 4, and 6); or disagrees (numbers 1 and 2). About 15 per cent of both groups agree that druggists can sell you something that will make you feel better. Most of these added, however, that this was not legal.

Table 44 shows the mean score on the perceived medical knowledge scale by the self-diagnosis scores. In both groups, the higher the self-

TABLE 43

ITEM ANALYSIS OF THE SELF-DIAGNOSIS SCALE BY TYPE OF PHYSICIAN UTILIZED FOR PRIMARY CARE

ITEM	ITEMS AGREED TO				
	Physician Utilized				χ^2
	G. P. n = 91 n %		Specialist n = 109 n %		p
1. People should not go see the doctor unless they have a good idea as to what is wrong with them.	1	1.09	6	5.50	*
2. One of the best ways to decide what is wrong with you is to talk to a neighbor.	0	-	0	-	*
3. Doctors always tell you the right thing to do in order to get well.	53	58.24	63	57.79	0.006
4. You should always tell the doctor what is wrong with you.	78	85.71	92	84.40	0.003
5. If you are sick, the druggist can sell you something that will make you feel better.	15	16.48	16	14.67	0.024
6. It is necessary to follow the doctor's advice if you want to get well.	81	89.01	99	90.82	0.439

* Expected frequency less than 5 per cell; χ^2 not applicable.

diagnosis score, the higher the mean score on perceived medical knowledge.

TABLE 44

TYPE OF PHYSICIAN UTILIZED BY SELF-DIAGNOSIS SCORE AND
MEAN SCORE OF PERCEIVED MEDICAL KNOWLEDGE

Self-Diagnosis Score	Mean Score - General Practitioner	Mean Score - Specialist
0	15.33	16.67
1	14.58	16.09
2	17.07	16.89
3	19.50	18.00

Table 45 shows the relationship of the scores on perceived medical knowledge to the scores on the self-diagnosis scale. While this is not a significant result, it should be noted that the chi square value is close to the ten per cent level. By examining the data presented in Tables 44 and 45, it appears that there may be a relationship between increased perception of medical knowledge and a high self-diagnosis score.

TABLE 45

SCORE ON PERCEIVED MEDICAL KNOWLEDGE SCALE BY
SELF-DIAGNOSIS SCORES

Self-Diagnosis Scores	Medical Knowledge Scores			
	0 - 16		17 +	
	n	%	n	%
0 - 1	75	87.21	89	78.07
2 - 3	11	12.79	25	21.93
n = 200	86	100.00	114	100.00

$$\chi^2 = 2.189; p > .05$$

The self-diagnosis score has no relationship to knowledge of the medical problem before seeing the physician--in both groups the mean score is about 0.830. Table 46 also shows no relationship between the self-diagnosis score and knowledge of the medical problem for the whole sample.

TABLE 46

SELF-DIAGNOSIS SCORES BY KNOWLEDGE OF MEDICAL PROBLEM

Response	Self-Diagnosis Score					
	0		1		2 +	
	n	%	n	%	n	%
Yes, know what's wrong	52	69.33	59	66.29	24	66.67
No, don't know what's wrong	23	30.67	30	33.71	12	33.33
n = 200	75	100.00	89	100.00	36	100.00

$$\chi^2 = 0.181; p > .05$$

Table 47 shows the difference in method of referral by the self-diagnosis score for the total sample.

TABLE 47

SELF-DIAGNOSIS SCORES BY METHOD OF REFERRAL TO PHYSICIAN

Method of Referral	Self-Diagnosis Score			
	0 - 1		2 - 3	
	n	%	n	%
Self	37	22.51	17	47.25
Family/Friends	46	27.89	11	30.58
Doctor	81	49.60	8	22.17
n = 200	164	100.00	36	100.00

$$\chi^2 = 11.607; df = 2; p < .01$$

As can be seen from this table, significantly more people who score above 2 decide themselves to consult a specialist. A higher percentage of those referred by a physician score either 0 or 1.

From the examination of these variables, it is seen that this sample is, in general, a well-educated one. Those that utilize specialists have a significantly higher amount of perceived knowledge, but do not seem to have a greater amount of accurate knowledge than those who utilize general practitioners. Although the results using the Self-Diagnosis Scale are inconclusive, there does seem to be the suggestion of a relationship between the amount of self-diagnosis and perceived medical knowledge. There is a significant relationship between the Self-Diagnosis Scale and the method of referral to a specialist.

CHAPTER VII

CONCLUSION

The intent of this dissertation is to evaluate charges that are taking place within the health care delivery system and to examine the implications of these changes. One of the most critical changes involving the ecosystem of delivery of medical services is that of specialization. Specialization is increasing but the impact of this increase upon the patient remains undocumented. The particular aspect of the health care delivery system selected for analysis is the physician-patient relationship, one of the basic foundations of the entire delivery system. This is evaluated from the perspective of the patient.

Some evidence suggests that the key to the successful operation of the system is the generalist physician, whether he is called a general practitioner or a family practice specialist. This study attempts to document the patient's perception of the place of the general practitioner in the organizational system as well as consumer attitudes toward specialists and general practitioners.

Before considering the conclusions and implications of the study, it is important to note problems in design. As with most attitude studies, the instrumentation cannot be said to be definitive. An effort was made to utilize only instruments that have been used previously, not only for comparison but also for reliability.

The classification of patients into two groups posed problems. In an effort to objectify this process, a seven-point classification system was used to identify two utilization patterns. In creating an index for utilization of health professionals, it must be decided which criterion is more important--the patient's perception or the health professional's evaluation. For example, the group that was classified as utilizing general practitioners really include: a measurement of a pattern of utilization, as evaluated by professional criteria. There are some respondents who go to general practitioners but do not utilize them according to the axioms of the gatekeeper model. This whole area of devising indices to reflect utilization patterns, although valuable, requires further research.

The chief bias that occurs in telephone surveys is social class. In this study, since the population of interest is all middle and upper classes, that bias is not relevant.

It was negatively hypothesized that the type of physician selected for primary ambulatory care would be unrelated to three factors: 1) the attitudes of the patient toward professional competence and the physician-patient relationship; 2) the patient's image of physicians; and 3) perceived medical knowledge. The results of the testing of these three hypotheses are presented in Chapter V. The second and third hypothesis were rejected; that is, a significant relationship does exist between the type of physician utilized for primary care and the patient's image of physicians and the patient's perceived medical knowledge. However, the first hypothesis was not rejected. No relationship was demonstrated between the type of physician utilized and the attitudes of the patients toward professional competence and physician-patient relationship, as measured by

scales selected for the study. Both groups are equally positive toward the physician-patient relationship and both groups express equal satisfaction with the competence of their physician.

The reasons for not being able to reject this hypothesis are complex. One problem may be in the two Thurstone scales. They have been used in many different types of populations and have had parallel form reliability tests. As Hulka pointed out, however, the results of the stringent reliability tests were "modest", and they do indicate the need for further testing (Hulka, et al., 1971). In addition, the Oklahoma City sample had some difficulty with the level of conceptualization and abstraction needed for responding to the items. On an item such as "A lot of doctors do not care whether or not they hurt you during the examination," many respondents would agree but then quickly note that "their physician" was not like that. It was explained to the respondent that she should base her answer on a generalization of all physicians, but it is possible that some responses had reference to a particular physician, whom the patient was not inclined to criticize.

Finally it must be recognized that the answers solicited on these two scales may be socially acceptable ones, with the respondents hesitant to agree to the obviously negative items.

Despite the lack of a relationship between the type of physician utilized for primary care and attitudes toward the physician-patient relationship and professional competence, other significant differences were found between the two utilization groups. Those who utilize specialists for primary care have no primary source for emergency care. They also lack a main source for information or advice, and illness. In all three cases, those who utilize specialists indicate that they decide what kind of prob-

lem they have before consulting a medical source. Thus, those that utilize specialists participate more in the decision-making process than do those who utilize general practitioners as the gatekeeper to the rest of the medical care system. In addition, those that utilize specialists are far more likely to have consulted a second physician for a problem without telling the first one about it, and are more likely to have been referred to the physician by a member of their family or friends. Those who utilize general practitioners are more likely to be referred by a physician.

A question raised by this finding is whether patients who select specialists prefer to be more self-reliant in medical decisions or whether they are forced to become decision-makers because of the type of medicine practiced by specialists. It also seems that those who utilize specialists have a greater degree of perceived medical knowledge. Even though the knowledge may not be scientifically correct, it does provide a basis for the patient to select a physician. Those that utilize general practitioners are more likely to allow the physician to further guide them in the delivery system.

As expected, age and social class both relate to the type of physician selected. Those who are younger and in a higher social class are more likely to select a specialist. These are the same persons who are more likely to have a higher educational level. As public health educational efforts increase, a paradoxical result may be that the consumer takes more responsibility for his own medical decisions. This may lead to a further increase in utilization of specialists and a greater professional decline of the general practitioner.

Another important variable that requires more investigation is the family's perception of medical need. In this study, no relationship

was found between the self-assessed health rating and the physician utilized, although a relationship was demonstrated between frequency of physician visits and the type of physician. Those that utilize specialists tend to visit their physician more often than those that utilize general practitioners, although other variables may be operating, since a higher frequency is also related to lower age and larger families. It would be valuable to explore whether those that utilize specialists view their medical problems as more serious than do those that utilize general practitioners. In addition, it would be interesting to know how many physician visits to specialists and general practitioners are rated by the physician as necessary. Those that utilize specialists may be overly concerned with their health needs. This also has important implications for health education programs. It should be known if increasing health education makes people overly sensitive to their symptoms and more likely to consult a physician unnecessarily.

The results of this study in regard to the perception of medical knowledge need to be examined closely because some important issues are raised and directions for further studies are pointed out. It was concluded that those who utilize specialists have a greater degree of perceived medical knowledge, but that knowledge is no more correct than the knowledge of those that utilize general practitioners. However, it is obvious that those who utilize specialists participate in the decision-making process about their medical problems to a much greater degree than do those who utilize general practitioners. The basis for this behavior, therefore, seems not to be accurate knowledge, but perceived knowledge. If a person operates under the misconception that diabetes is caused by eating too much sugar, his course of action as a patient worried about the possibility of

getting diabetes will be significantly different from the person who is aware that family history and weight control are important factors. The type of health care personnel selected, regardless of whether an M. D. or a chiropractor, will be influenced, not by the validity of the patient's knowledge, but by his certainty. This significant finding should cause public health professionals to evaluate the role of health education very carefully. If perception of medical knowledge is as crucial as this study seems to indicate, it is very important that consumers have medically correct information on which to base their actions. A related phenomenon which needs further study is the concept and process of self-diagnosis. As measured by this study, self-diagnosis has some significant relationships, but much more work remains to be done on the problem.

Perhaps the most conclusive results of this study are those concerning the image of the specialist and the image of the general practitioner. As a total group, the Oklahoma City sample seems to rate the general practitioner higher than did a comparable national sample in 1963 (Cahal, 1963). As predicted, those that utilize specialists have a much lower image of the general practitioner than do those who utilize general practitioners. Those that utilize specialists relegate fewer tasks to the general practitioner and view him as less competent. The surprising finding is, those who utilize general practitioners also view him as less competent. Both groups view the general practitioner as less competent and as less able to keep up with latest developments. At the same time both view him as more personally interested in the patient as a human being, more willing to be called on in an emergency, more fair in prices and fees, more helpful to talk with, and more interested in preventive medicine. Those that select a general practitioner seem to do so in spite of two-

thirds believing he is less competent than a specialist. On the other hand, those that choose a specialist seem to do so because they feel he is more competent and they are obviously willing to have a less personal relationship than they might have with a general practitioner. Nevertheless, both groups list competence as the prime consideration in selection of a physician. This may indicate some difficulty in the definition of competency. Certainly a specialist would be more competent within his speciality and less competent in another field, while a general practitioner may be viewed as broadly competent. Competence is therefore no doubt related to the function of the physician. Despite this qualification, it seems from these findings that a specialist has an image of somehow being more competent than a general practitioner. This may not denote a degrading attitude toward the generalist, but rather a recognition of the specialist as above the generalist. This argument is in fact perpetuated by medical education, as pointed out in Chapter II.

Another item to consider in the seeming paradox discussed above in factors considered in the selection of a physician is the economic one. Those who utilize a general practitioner seem to feel he is less competent than a specialist. They may, therefore, be choosing to go to him because they feel he is more reasonable in prices than a specialist. In fact, Table 35 indicates that 91 per cent of those who utilize a general practitioner do feel he is more fair in prices and fees than a specialist. The relationship illustrated in Table 27 between utilization of a specialist and higher frequency of visits to a physician within the last year may also indicate an economic factor, especially since the type of physician is not related to the health rating of the respondent. Those that utilize specialists may be able to afford to go to a physician more often. In addi-

tion, the finding that those who utilize specialists are a younger group could be because of those who are younger having more economic resources than older persons. The economic factor was controlled for in this study by sampling from middle and upper middle class populations in Oklahoma City. Some suggestions of social class differences do appear in Table 21 however. The issue involving economics is more complex than simply the amount of money available, especially in a sample composed of middle and upper middle class. This is illustrated by the finding that, of those who utilize specialists, 75 per cent feel that the general practitioner is more fair in prices and fees than the specialist. Attitudes toward the value of going to a specialist rather than to a general practitioner are obviously also important here. Certainly, the importance of the economic factor in selection of a physician needs investigation.

The main conclusion of this study is that for an increasing number of people—from 14 per cent in 1962 (Canal, 1963) to 54 per cent in this sample—the concept of a physician as a gatekeeper to the rest of the medical care system is irrelevant, as is the value of having a personal physician. In some of their comments, those who utilize specialists seemed to place the general practitioner virtually outside the realm of the delivery system. Even those who do utilize a general practitioner as a gatekeeper and do value a personal relationship with him, indicate serious doubt about his competency.

The impact of this concept on the future of health care delivery must be evaluated. Our current move in health care is toward increased centralization of services in one geographical area and increased emphasis upon some type of health professional to screen various medical problems and refer them to the appropriate resource within the system. Maintenance

health programs, for example, tend to strongly emphasize the whole concept of a gatekeeper who may be a health professional other than a general practitioner. These types of health care systems assume much less self-reliance on the part of patients than what this study indicates is present.

This problem is greater than the professional reputation of certain kinds of physicians. The role of public health professionals has also contributed to the situation. Educational campaigns may be actually increasing the trend toward utilization of specialists by raising levels of perceived medical knowledge, if not accurate knowledge. Increased education seems to be related to increased participation in the process of deciding when one is ill. Although increased education is certainly a desirable goal, some thought and research might be given to a different emphasis in educational programs. One alternative might be a program designed to teach the consumer how to utilize the health care delivery system efficiently. Another could be the recognition of professional capabilities and limitations of the various health personnel, as shown by Lewis and Resnik (1967).

At the same time, the delivery system itself may be further developed to meet the needs of the consumer as well as the needs of the professional. This can be achieved by approaching honestly the expressed demands of the consumer and the professional judgment of needs by health personnel. If it is decided that the consumer does need a personal relationship with one competent contact in the medical care system, further thought should be devoted to the identity of this contact. If, however, it seems that a gatekeeper is not needed, then perhaps a large scale health education program should provide people with as much correct knowledge as is possible upon which to base health decisions.

The implication of these findings for the education of various health professionals is the realization that it is important to be able to objectively evaluate the components of the health care ecosystem and the changes that are taking place within that system. The impact of all changes, both planned and unplanned, must be recognized. It is not that the maintenance health system mentioned previously is defective; rather the impact of the changes planned by implementing this system must be considered.

The larger implication of this dissertation might be the initiation of a campaign to demythologize the medical profession--both the physician and the patient. This is vital in attempting to objectively evaluate the profession of physicians and the needs of the patient in trying to separate out and deal with some cultural myths which romanticize the whole process of the physician-patient interaction. The assumption by most health professionals today is that consumers need one warm friendly contact for the entire medical care delivery system. The data of this study indicate that a majority of people do not want this gatekeeper and those that do utilize a gatekeeper have little respect for his competency. Of course, this whole area is as complex as are the human needs that are represented. Nonetheless, a first step is vital in order to create a health care delivery system that meets the needs of the consumer and delivers quality health and medical care.

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APPENDIX A

TABLE 1

	#	AREA	NAME
Scores (1)	1.	Does your family have what you would consider a family doctor? Yes _____ Name and Specialty _____ No _____ Location _____ What members of the family go to see him? _____	
(1 for all same)	2.	What other types of doctors does your family use? _____	
(1 for same)	3.	When you want information or advice on matters relating to your own or your family's health, where do you usually turn to get it? Dr. _____ (Name and Specialty) Other _____	
(1 for same)	4.	When you or any member of your family is sick, who do you go to see first? Dr. _____ (Name and Specialty) Other _____	
(1 point)	5.	If it is an emergency, what do you do? Call family doctor/meet at hospital _____ Other _____	
	6.	Have you consulted a specialist within this last year? Yes _____ (Go to 7) No _____ (Go to 8)	
	7.	What were their names and what kind of specialists were they? _____ _____	
	7A.	What other specialists have you or your family seen? _____ _____ _____	
	8.	Have you ever consulted a specialist for you or your family? Yes _____ Name and Type _____ No _____	
(1 for same)	9.	Were you referred to these specialists or did you decide to see one your- self? Referred _____ By When _____ _____	

TABLE 1--Continued

-
-
10. Have you or your family ever gone to a second doctor to get his opinion about some condition without telling your first doctor about it?

Yes _____

(1 for no)

No _____

Maximum Score 7

TOTAL SCORE _____ UTILIZATION _____ G. P. _____ SPECIALIST _____

TABLE 2

Now I have a set of broad opinion statements I would like to read to you. I want you to tell me whether you agree or disagree with each statement.

Scale Value	Yes	No	
(6.21)	_____	_____	1. You cannot expect any one doctor to be perfect.
(6.77)	_____	_____	2. Doctors make you feel like everything will be all right.
(5.70)	_____	_____	3. A doctor's job is to make people feel better.
(3.37)	_____	_____	4. Too many doctors think you cannot understand the medical explanation of your illness, so they do not bother explaining.
(2.48)	_____	_____	5. Doctors act like they are doing you a favor by treating you.
(2.71)	_____	_____	6. A lot of doctors do not care whether or not they hurt you during the examination.
(2.91)	_____	_____	7. Many doctors treat the disease but have no feeling for the patient.
(3.96)	_____	_____	8. Doctors should be a little more friendly than they are.
(1.70)	_____	_____	9. Most doctors have no feelings for their patients.
(7.34)	_____	_____	10. Most doctors let you talk out your problems.
(8.68)	_____	_____	11. Doctors are devoted to their patients.
(7.13)	_____	_____	12. Doctors do their best to keep you from worrying.
(5.08)	_____	_____	13. With so many patients to see, doctors cannot get to know them all.
(8.28)	_____	_____	14. Most doctors take a real interest in their patients.

(a) # items agreed with _____

(b) Sum of the score values of those items _____

TOTAL SCORE (b/a) _____

TABLE 3

Scale Value	Yes	No	
(2.74)	_____	_____	1. People do not know how many mistakes doctors really make.
(8.32)	_____	_____	2. Today's doctors are better trained than ever before.
(3.23)	_____	_____	3. Doctors rely on drugs and pills too much.
(3.04)	_____	_____	4. No two doctors will agree on what is wrong with a person.
(3.99)	_____	_____	5. Given a choice between using an old reliable drug and a new experimental one, many doctors will choose the new one.
(2.15)	_____	_____	6. Doctors will not admit it when they do not know what is wrong with a person.
(6.14)	_____	_____	7. When doctors do not cure mildly ill patients, it is because the patients do not cooperate.
(8.04)	_____	_____	8. Doctors will do everything they can to keep from making a mistake.
(1.70)	_____	_____	9. Many doctors just do not know what they are doing.
(4.44)	_____	_____	10. Doctors spend more time trying to cure an illness you already have rather than preventing one from developing.
(5.21)	_____	_____	11. Doctors are put in the position of needing to know more than they possibly could.
(6.92)	_____	_____	12. Even if a doctor cannot cure you right away, he can make you more comfortable.
(7.59)	_____	_____	13. Doctors can help you both in health and sickness.
(6.38)	_____	_____	14. Doctors sometimes fail because patients do not call them in time.

(a) # items agreed to _____

(b) Sum of the score values of those items _____

TOTAL SCORE (b/a) _____

TABLE 4

Now I have a list of things or tasks that doctors do. As I read them, please indicate to me whether you would prefer that a general practitioner or a specialist do these things for you or your family.

<u>Tasks</u>	<u>G.P.</u>	<u>Specialist</u>
1. Explain results of tests		
2. Explain what is wrong with the patient		
3. Give a shot		
4. Examine the throat		
5. Explain results of x-ray exam		
6. Instruct on a special diet		
7. Explain how and why to take medicine		
8. Give a general physical exam		
9. Decide when you should go to the hospital		
10. Give a routine exam to children, including shots		
11. Perform test, such as PAP smear, EKG, etc.		
12. Give a prescription for an illness		
13. Set a broken bone		
14. Care for a chronic disease such as heart trouble or diabetes		
15. Do surgery		
16. Help you work out some personal problem		
17. Diagnose your symptoms and decide what's wrong with you		

TOTAL SCORE (Ratio of G.P. to total answered) _____

TABLE 5

Following are ten items that are qualities of good physicians. I would like for you to tell me which of these items are more characteristic of a G. P. and which are more characteristic of a specialist.

<u>Characteristic</u>	<u>G. P.</u>	<u>Specialist</u>
1. Takes a personal interest in each patient		
2. Sincerely devoted to his work		
3. Treats each person as a human being		
4. Really glad to help in an emergency		
5. Fair in prices and fees		
6. Competent		
7. Makes one feel better just by talking to him		
8. Explains everything thoroughly		
9. Tries to keep up with the latest developments in his field		
10. Tries to prevent illness as well as cure it		
TOTAL SCORE (Ratio of G. P. to total answered) _____		

TABLE 6

Which of these three items do you think is most important for a doctor?

- _____ Competent, qualified (knows what he is doing).
 _____ Takes a personal interest in the patients.
 _____ Way the doctor behaves (thoughtful, sympathetic, concerned, friendly, etc.).

TABLE 7

I have some questions about medical conditions. I am going to read a statement to you that will have four possible answers, one of which is "I don't know." Feel free to answer "I don't know" if you don't.

1. Tuberculosis of the lungs is due to:

- 1 _____ 1. Prolonged exposure to the cold.
 2 _____ 2. Infection with a germ.
 1 _____ 3. Anemia and vitamin deficiency.
 0 _____ 4. Don't know.

2. A stroke is:

- 1 _____ 1. A blood clot in the heart.
 1 _____ 2. Blood clot in the arms and legs causing paralysis.
 2 _____ 3. Hemorrhage or blood clot in the brain.
 0 _____ 4. Don't know.

3. The most common symptom of a stroke is:

- 1 _____ 1. Severe chest pain spreading to the arm.
 2 _____ 2. Paralysis.
 1 _____ 3. Rapid and irregular heartbeat.
 0 _____ 4. Don't know.

4. The most common symptom of a coronary thrombosis is:

- 1 _____ 1. Rapid irregular heartbeat.
 1 _____ 2. Paralysis.
 2 _____ 3. Steady pressing pain in the chest.
 0 _____ 4. Don't know.

5. Arthritis is a condition in which:

- 2 _____ 1. The joints are painful, swollen or misshapen.
 1 _____ 2. The joints always become completely stiff and useless.
 1 _____ 3. Imaginary joint pains caused by nervousness.
 0 _____ 4. Don't know.

6. Diabetes is:

- 1 _____ 1. Contagious or catching.
 1 _____ 2. Due to a poorly functioning liver.
 2 _____ 3. More common in people who are overweight.
 0 _____ 4. Don't know.

7. Asthma is a condition in which there is:

- 1 _____ 1. A severe chest cold.
 2 _____ 2. Wheezing and difficulty in breathing.
 1 _____ 3. A form of pneumonia.
 0 _____ 4. Don't know.

TABLE 7--Continued

-
-
8. Leukemia is:
- 2 _____ 1. A cancer-like condition.
1 _____ 2. A severe infection.
1 _____ 3. A condition resulting from iron deficiency.
0 _____ 4. Don't know.
9. Persons with stomach ulcers often:
- 1 _____ 1. Have severe cramps and diarrhea.
1 _____ 2. Have pain in the abdomen right after eating.
2 _____ 3. Have pain in the abdomen that is relieved by eating.
0 _____ 4. Don't know.
10. Which of the following kinds of people would be most like to get diabetes?
- 1 _____ 1. People who are underweight.
2 _____ 2. People who have relatives with diabetes.
1 _____ 3. People who eat too much sugar.
0 _____ 4. Don't know.

TOTAL SCORE _____

TABLE 8

Do you agree or disagree with the following statements?

<u>Yes</u>	<u>No</u>	
<u>1</u>		1. People should not go see the doctor unless they have a good idea as to what is wrong with them.
<u>1</u>		2. One of the best ways to decide what is wrong with you is to talk to a neighbor.
	<u>1</u>	3. Doctors always tell you the right thing to do in order to get well.
	<u>1</u>	4. You should always tell the doctor what is wrong with you.
<u>1</u>		5. If you are sick, the druggist can sell you something that will make you feel better.
	<u>1</u>	6. It is necessary to follow the doctor's advice if you want to get well.

TOTAL SCORE _____

TABLE 9

Do you generally have a very good idea as to what is wrong with you when you go to the doctor? Yes _____ (go to A)
No _____

A. Does that help you in selecting the appropriate doctor for you to see?
Yes _____
No _____

Now I have just a few more questions.

What was your age as of your last birthday? _____

How many children do you have and what are their ages? _____

Is your husband living in the home? Yes _____
No _____

What was the last grade in school you completed? _____

Do you have a job outside the home? Yes _____ What type? _____
No _____

What was the last grade that your husband completed? _____

What kind of job does he have? _____

How would you say your health is now? 1. Poor 2. Fair 3. Average
4. Above Average. 5. Excellent

How often in the last 12 months has your family seen a physician for any reason? _____

From the time you leave home to the time you get back, how long does it usually take you to see the doctor? _____

If you were going to select a physician today, what would be some important factors you would consider?

1. _____ Competent, qualified (knows what he is doing).
2. _____ Takes a personal interest in the patient.
3. _____ Way the doctor behaves (thoughtful, sympathetic, concerned, friendly, etc.).
4. _____ Makes house calls.
5. _____ Tells the patient the truth (says when he doesn't know).
6. _____ Gives patient sufficient time.
7. _____ Way the doctor proceeds (reliable, thorough, careful).
8. _____ Is available when you need him.
9. _____ Explains things so patient understands.
10. _____ Listens to the patient.
11. _____
12. _____
13. _____

APPENDIX B

May 12, 1972

Dear

Your address was picked at random from the Oklahoma City telephone directory to participate in a survey concerning the utilization of physician's services. A total of 300 Oklahoma City households will be surveyed by telephone. The telephone interview will be about 20 minutes long, with no confidential information being solicited. Also, no record of your name, address or phone number will be kept. If you have questions concerning the validity of this survey, please feel free to contact the Human Ecology office at 236-1366, extension 147 or 148.

I will be contacting you by phone within the next week and will appreciate you giving me 20 minutes of your time.

Thank you.

Sincerely yours,

Paula Stamps
Graduate Student
Human Ecology

APPENDIX C

**ACTUAL SCORE ON THURSTONE SCALE MEASURING SATISFACTION
WITH PHYSICIAN-PATIENT RELATIONSHIP**

UTILIZE GENERAL PRACTITIONERS		UTILIZE SPECIALISTS		
3.79	6.31	4.01	6.17	6.90
3.92	6.35	4.45	6.20	6.90
4.13	6.40	4.56	6.21	6.91
4.28	6.43	4.57	6.23	6.91
4.29	6.43	4.72	6.25	6.91
4.54	6.45	4.74	6.40	6.91
4.74	6.48	4.88	6.42	6.91
4.75	6.50	4.95	6.50	6.92
4.79	6.54	4.95	6.50	6.99
4.80	6.57	5.01	6.52	7.03
4.88	6.57	5.02	6.54	7.15
4.90	6.57	5.02	6.54	7.15
5.15	6.58	5.03	6.54	7.15
5.28	6.60	5.03	6.54	7.15
5.38	6.61	5.08	6.55	7.16
5.45	6.68	5.18	6.55	7.16
5.46	6.70	5.19	6.58	7.17
5.46	6.75	5.23	6.62	7.22
5.48	6.75	5.38	6.62	7.22
5.59	6.82	5.49	6.64	
5.67	6.82	5.62	6.68	
5.81	6.84	5.64	6.69	
5.82	6.86	5.65	6.75	
5.82	6.89	5.65	6.75	
5.84	6.89	5.69	6.76	
5.86	6.89	5.70	6.76	
5.88	6.89	5.76	6.80	
5.89	6.89	5.78	6.83	
5.90	6.97	5.82	6.88	
5.93	6.98	5.83	6.88	
5.94	6.99	5.84	6.89	
5.98	6.99	5.86	6.89	
6.01		5.87	6.89	
6.01		5.88	6.89	
6.03		5.88	6.89	
6.05		5.89	6.89	
6.06		5.90	6.89	
6.07		5.91	6.89	
6.14		5.92	6.89	
6.22		5.99	6.89	
6.23		6.01	6.89	
6.25		6.01	6.89	
6.25		6.06	6.89	
6.28		6.10	6.89	
6.29		6.15		

**ACTUAL SCORES ON THURSTONE SCALE MEASURING SATISFACTION
WITH PROFESSIONAL COMPETENCE**

UTILIZE GENERAL PRACTITIONERS		UTILIZE SPECIALISTS		
4.72	6.06	4.86	5.95	6.58
4.73	6.06	4.94	5.95	6.58
4.90	6.06	4.95	5.97	6.59
4.91	6.07	4.96	6.05	6.59
5.05	6.14	5.08	6.06	6.59
5.13	6.14	5.09	6.06	6.60
5.23	6.17	5.31	6.14	6.66
5.23	6.17	5.33	6.15	6.66
5.24	6.18	5.35	6.17	6.67
5.23	6.19	5.36	6.18	6.72
5.24	6.19	5.42	6.19	6.76
5.28	6.19	5.45	6.19	6.83
5.35	6.19	5.51	6.19	6.94
5.39	6.20	5.51	6.19	6.94
5.45	6.20	5.53	6.19	6.94
5.46	6.21	5.54	6.19	6.94
5.56	6.25	5.56	6.19	6.95
5.56	6.30	5.58	6.19	7.07
5.56	6.31	5.59	6.19	7.09
5.60	6.32	5.60	6.19	
5.61	6.32	5.62	6.20	
5.62	6.34	5.63	6.20	
5.62	6.34	5.67	6.21	
5.65	6.41	5.68	6.25	
5.68	6.41	5.90	6.26	
5.71	6.41	5.73	6.33	
5.74	6.41	5.74	6.41	
5.74	6.41	5.74	6.41	
5.78	6.42	5.75	6.41	
5.79	6.45	5.79	6.41	
5.79	6.45	5.80	6.41	
5.79	6.45	5.81	6.41	
5.79	6.58	5.87	6.41	
5.82	6.59	5.88	6.41	
5.82	6.59	5.89	6.41	
5.86	6.59	5.89	6.41	
5.87	6.60	5.90	6.41	
5.93	6.62	5.90	6.42	
5.94	6.63	5.90	6.42	
5.95	6.63	5.90	6.45	
5.95	6.64	5.91	6.45	
6.02	6.64	5.91	6.45	
6.03	6.66	5.94	6.46	
6.05	6.83	5.94	6.57	
6.06	7.23	5.94	6.58	
	7.23			

APPENDIX D

ACTUAL SCORES ON THE TASK DELEGATION SCALE

UTILIZE GENERAL PRACTITIONER		UTILIZE SPECIALIST		
.117	.714	0.00	.333	.687
.117	.733	0.00	.352	.687
.411	.750	0.00	.375	.705
.437	.750	0.00	.375	.764
.500	.764	0.00	.411	.764
.500	.764	0.00	.411	.764
.500	.764	0.00	.411	.764
.500	.764	0.00	.411	.764
.500	.764	0.00	.411	.800
.529	.764	0.00	.417	.812
.529	.764	0.00	.437	.812
.529	.800	0.00	.470	.823
.562	.800	0.00	.470	.823
.562	.823	0.00	.470	.875
.562	.823	0.00	.470	.882
.588	.823	0.00	.500	.882
.588	.823	0.00	.500	.882
.588	.823	0.00	.500	1.00
.600	.823	.062	.500	1.00
.615	.823	.076	.500	
.625	.823	.117	.529	
.625	.823	.117	.529	
.625	.823	.117	.529	
.625	.830	.117	.529	
.625	.835	.117	.529	
.649	.833	.117	.529	
.647	.846	.117	.562	
.647	.866	.176	.562	
.647	.875	.176	.562	
.647	.875	.176	.562	
.647	.875	.187	.562	
.647	.875	.187	.580	
.647	.882	.200	.580	
.647	.882	.200	.588	
.647	.882	.200	.588	
.687	.933	.266	.588	
.692	.941	.283	.588	
.705	.941	.294	.588	
.705	.941	.294	.647	
.705	.941	.294	.647	
.705	.950	.294	.647	
.705	1.00	.312	.647	
.705	1.00	.312	.647	
.705	1.00	.312	.666	
.714	1.00	.333	.666	
	1.00			

ACTUAL SCORES ON THE CHARACTERISTIC SCALE

UTILIZE GENERAL PRACTITIONER		UTILIZE SPECIALIST		
0.00	.700	0.00	.400	.700
0.00	.700	0.00	.428	.714
0.00	.700	0.00	.428	.750
.285	.700	0.00	.428	.750
.375	.700	0.00	.428	.750
.400	.700	0.00	.444	.777
.400	.700	0.00	.444	.777
.444	.714	0.00	.500	.777
.444	.714	0.00	.500	.800
.500	.750	0.00	.500	.800
.500	.750	0.00	.500	.800
.500	.750	0.00	.500	.830
.500	.750	0.00	.500	.888
.500	.800	0.00	.500	.900
.500	.800	0.00	.500	.900
.500	.800	0.00	.500	.900
.500	.800	0.00	.500	.900
.500	.800	0.00	.500	1.00
.555	.800	0.00	.500	1.00
.555	.800	0.00	.500	1.00
.555	.800	0.00	.500	
.555	.800	0.00	.571	
.555	.800	0.00	.600	
.555	.800	.001	.600	
.571	.833	.001	.600	
.600	.833	.100	.600	
.600	.857	.100	.600	
.600	.857	.100	.600	
.600	.888	.100	.600	
.600	.900	.125	.600	
.600	.900	.125	.600	
.600	.900	.200	.600	
.600	.900	.200	.600	
.600	.900	.200	.600	
.600	.900	.200	.625	
.600	.900	.200	.625	
.600	1.00	.222	.666	
.600	1.00	.250	.666	
.625	1.00	.250	.667	
.625	1.00	.285	.669	
.625	1.00	.285	.700	
.630	1.00	.285	.700	
.666	1.00	.333	.700	
.700	1.00	.375	.700	
.700	1.00	.400	.700	
.700	1.00	.400	.700	
	1.00			

APPENDIX E

ACTUAL SCORES ON THE PERCEPTION OF MEDICAL KNOWLEDGE SCALE

UTILIZE GENERAL PRACTITIONER		UTILIZE SPECIALIST		
0	16	5	17	19
6	16	7	17	19
6	16	9	17	19
7	17	10	17	19
8	17	10	17	19
9	17	11	17	19
9	17	11	17	19
10	17	11	17	19
10	17	11	17	19
10	17	12	17	19
10	17	12	17	19
10	17	12	18	20
10	18	12	18	20
10	18	12	18	20
10	18	12	18	20
11	18	12	18	20
12	18	13	18	20
12	18	13	18	20
12	18	13	18	20
12	18	13	18	20
12	18	14	18	
12	18	14	18	
12	18	14	18	
13	18	14	18	
13	18	14	18	
14	18	14	18	
14	19	15	18	
14	19	15	18	
14	19	15	18	
14	19	15	18	
14	19	15	18	
14	19	15	18	
15	19	15	18	
15	19	15	18	
15	19	16	18	
15	19	16	18	
15	19	16	19	
15	20	16	19	
16	20	16	19	
16	20	16	19	
16	20	17	19	
16	20	17	19	
16	20	17	19	
16	20	17	19	
16	20	17	19	
16	20	17	19	
20				

APPENDIX F

Two respondents utilize chiropractors for all their health needs. One of these respondents also utilizes D.O.'s, but only as a supplement to the chiropractor. Both indicate that they view the chiropractor as the family physician, all members of both families consult him, they both name the chiropractor as the one they consult for information and advice, for emergency situations and for any member who is sick. They both decided for themselves to consult a chiropractor--the referral method of family or friends was not indicated. Both respondents indicate that they are pleased with the care they receive.

Both live in the Northwest area of Oklahoma City. One is age 43 with three children at home and is in Hollingshead's Social Class II. The other is 53 with three children grown and out of the home and is in Hollingshead's Class III.

The scores on the Thurstone Scale are below the mean of the scores for the total sample of M.D.-utilizers. The two scores on the scale measuring satisfaction with personal relationships are 5.16 and 5.65. The two scores on the scale measuring satisfaction with professional competence are 4.97 and 5.87. These two respondents seem to have a low estimation of both the personal relationship and professional competence of physicians.

One respondent could not distinguish between a general practitioner and a specialist on the Task Delegation Scale and the Characteristics Scale. She preferred a chiropractor in all cases. The other respondent scored 0.400 on the Task Delegation Scale and 0.300 on the Characteristics Scale. It is important to note that she classified her chiropractor as a specialist.

The scores on the Medical Knowledge Scale are in line with the

scores from the rest of the sample--19 and 16. The scores on the Self-Diagnosis Scale are also comparable to the others--both scored 1.

Both indicate that they have a good idea as to what is wrong with them when they go to the doctor. Both also go to their chiropractor on a monthly basis for "check-ups."

The selection factors they note are interesting--both indicate that competency is important and explaining things so the patient understands. In addition, one noted the value of preventive medicine as practiced by the chiropractor and both noted the importance of medical care by "nature's way." Both indicate they are very pleased with the care they receive from the two chiropractors.

APPENDIX G

RELATIONSHIP OF THE DIFFERENCES BETWEEN THE SCORES ON THE TWO THURSTONE SCALES

										SCORES ON SCALE MEASURING SATISFACTION WITH PERSONAL RELATIONSHIP											
UTILIZE GENERAL PRACTITIONER				N	UTILIZE SPECIALIST				N					MEAN		DIFFERENCE		RANGE OF DIFFERENCE			
n	+	*	-		n	+	-						G. P.	SPECIALIST	G. P.	SPECIALIST					
	z	n	z		n	z	n	z					+	-	+	-	+	-	+	-	
-	-	2	100.00		2	-	-	-	-	3.00-3.99	2	1.00	-	1.34	-	-	-	-	-	-	
-	-	10	100.00		10	1	11.12	8	88.88	9	4.00-4.99	19	9.50	-	0.76	0.09	1.17	-	0.114	-	2.19
6	30.00	14	70.00		20	9	29.04	22	70.96	31	5.00-5.99	51	25.50	0.40	0.37	0.17	0.44	1.14	1.04	0.27	1.05
36	80.00	9	20.00		45	46	77.97	13	22.03	59	6.00-6.99	104	52.00	0.57	0.19	0.59	0.18	1.19	0.34	1.62	0.48
13	92.86	1	7.14		14	10	100.00	-	-	10	7.00-7.99	24	12.00	0.81	0.01	0.78	-	1.15	-	0.62	-
91					109					200				100.00							

* + indicates that the score on the scale measuring satisfaction with Personal Relationship is higher
 - indicates that the score on the scale measuring satisfaction with Professional Competence is higher

APPENDIX H

RELATIONSHIP OF THE DIFFERENCE BETWEEN THE TASK DELEGATION SCORES AND THE CHARACTERISTICS SCORES

UTILIZE GENERAL PRACTITIONER N					SCORES ON TASK DELEGATION N					MEAN DIFFERENCE					RANGE OF DIFFERENCE				
+ *		- *		N	+ *		- *		N	+ *		- *		N	+ *		- *		N
n	%	n	%		n	%	n	%		n	%	n	%		G. P.	SPECIALIST	G. P.	SPECIALIST	
-	-	-	-	-	1**	5.00	9**	45.00	20	0.0	-.099	20	10.00	-	-	-	.386	-	.650
-	-	2	100.00	2	8	55.67	4	33.33	12	.100	-.199	14	7.00	-	.583	.124	.450	-	.271
-	-	-	-	-	2	22.23	7	77.77	9	.200	-.299	9	4.50	-	-	.246	.216	-	.121
-	-	-	-	-	2	25.00	6	75.00	8	.300	-.399	8	4.00	-	-	.175	.280	-	.277
2	100.00	-	-	2	2	18.18	9	81.82	11	.400	-.499	13	6.50	.815	-	.124	.214	-	.259
2	14.29	12	85.71	14	17	73.91	6	26.09	23	.500	-.599	37	18.50	.033	.160	.264	.246	-	.300
9	50.00	9	50.00	18	4	44.45	5	55.55	9	.600	-.699	27	13.50	.072	.108	.141	.135	.094	.260
12	63.16	7	36.84	19	5	83.33	1	16.67	6	.700	-.799	25	12.50	.179	.115	.359	-	.300	.666
17	65.39	9	34.61	26	9	100.00	-	-	9	.800	-.899	35	17.50	.329	.100	.256	-	.793	.695
3	60.00	2	40.00	5	-	-	-	-	-	.900	-.999	5	1.50	.038	.059	-	-	.008	-
2	40.00	**		5	1	50.00	**		2	1.00		7	3.50	.368					
200 100.00																			

* + indicates that Task Delegation Score is higher
 - indicates that Characteristic Score is higher
 ** scores are the same

APPENDIX I

ACTUAL SELF DIAGNOSIS SCORES

UTILIZE GENERAL PRACTITIONER

n = 91

<u>Score</u>	<u>Number</u>	<u>Per Cent</u>
0	33	36.26
1	43	47.25
2	13	14.29
3	2	2.20

UTILIZE SPECIALIST

n = 109

<u>Score</u>	<u>Number</u>	<u>Per Cent</u>
0	42	38.53
1	46	42.20
2	18	16.51
3	2	1.84
4	1	0.92