

SELECTED FACTORS INFLUENCING A PATIENT'S DECISION TO  
CONTINUE IN OR DROP OUT OF AN ANTIHYPERTENSIVE  
TREATMENT PROGRAM

by

Barbara Ann Rezac

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SIGNED: Barbara Ann Rezac

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

Karen S. Sechrist  
KAREN S. SECHRIST  
Assistant Professor of Nursing

July 9 1974  
Date

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## ABSTRACT

Viewed within a social-psychological framework of illness and illness behavior this research studied influences on a patient's attendance in a VA nurse operated hypertension clinic.

Fifteen attenders and fifteen dropouts were interviewed utilizing a researcher compiled questionnaire. Of the dropouts, five had discontinued antihypertensive drugs of their own volition, one was so advised by a psychiatrist, and the remainder were taking medication prescribed in other clinics. Demographically, both groups were similar except that the dropouts had more formal education. Patients were generally well informed about hypertension and the two groups did not differ in their knowledge. Influencing factors for the attenders were: characteristics of the personnel, free care, and good quality health care obtained. Dropouts no longer taking medication cited the side effects of drugs, feeling well, and job responsibilities conflicting with clinic hours which included long pharmacy waits as reasons for not returning. Nonattenders obtaining medication at other clinics did so because of convenience rather than dissatisfaction with the hypertension clinic. Additional findings show all patients but one were receptive of hypertension supervision by the nurse.

Furthermore, responses tend to indicate that there would be general acceptance of increased use of well trained nursing assistants in this area.

## CHAPTER 1

### INTRODUCTION

Organized ambulatory services for health care delivery are of growing importance in today's society. As medicine makes scientific advances in the prevention and treatment of disease, people age and develop chronic illnesses which require not so much hospital inpatient care as periodic outpatient medical supervision while the individual continues in his or her normal social role.

One disease which requires prolonged outpatient supervision is essential hypertension. Hypertension or high blood pressure is an abnormal relationship between blood flow and peripheral resistance resulting in an increased pressure within the arterial system (Dustan 1973:34). While the prevalence of hypertension is high, the curable form amenable to surgical intervention occurs in less than five per cent of the hypertensive population (Fries 1973:5). The remaining individuals have hypertension without definable cause or essential hypertension which requires medical management.

Hypertension is characteristically a disease without symptoms. Kannel et al. (1969:116) note that this asymptomatic state occurs for some two decades before renal or

cardiovascular end organ damage becomes manifest. Unfortunately, when complications occur not only are they often serious, but they frequently appear suddenly and without warning. Treatment, therefore, is aimed at controlling the blood pressure at normal levels to reduce the risk and incidence of complications. The Veterans Administration Cooperative Study Group on Antihypertensive Agents (1967, 1970) has shown that treatment with antihypertensive medications during this asymptomatic phase is both simple and effective in decreasing morbidity and mortality due to hypertension.

Because antihypertensive treatment is prolonged but often simple and routine, Finnerty (1973:682) contends that it is unchallenging to physicians. He advocates increased utilization of specially trained nurses and paramedical personnel who can effectively manage the care of large numbers of hypertensive patients over an extended period of time. Chronic illness supervision of this type by nurses has proven successful (Lewis and Resnik 1967).

#### Significance of the Problem

The American Heart Association's Joint Council/Community Program Task Force on Hypertension (1972:2) states that "Hypertension probably represents the major health care challenge in the country today." Based on findings of the 1962 National Health Survey it was estimated that there are

currently 23 million individuals with hypertension in the United States. Only about ten per cent of these individuals are being treated effectively while the remainder are either unaware that they have the condition (approximately 50 per cent) or are aware and are either untreated or inadequately treated (Fries 1973:1). The seriousness of the hypertension problem is indicated by the fact that this disease is the leading cause of strokes, congestive heart and kidney failure; in addition it is a major risk factor in coronary artery disease and as such is the leading cause of morbidity and mortality in the United States. Not only is it the major cause of death in the black population but it also accounts for 40 to 70 per cent of all deaths of middle-aged individuals in the United States (Borhani 1973:7, 24).

In addition to being a major health care challenge, hypertension is undoubtedly also a major social problem. Etzioni (1972:45), a distinguished sociologist, notes that there are two basic approaches to the solution of social problems. The first approach is based on the assumption that people can be taught and persuaded via mass media to change their habits and behavior and that they will do so based on their new found knowledge. Etzioni challenges this assumption and calls for a reexamination of this assumption claiming that "human beings are not very easily changed after all." He notes that past massive educational campaigns have been costly and not markedly effective in

changing people's behavior. The second approach to social problem solving accepts people as they are and alters their environment instead. Etzioni contends these latter programs are more productive of positive results.

The nationwide campaign against hypertension utilizes both approaches. A variety of health related agencies have undertaken a massive educational campaign to combat the ignorance, lack of understanding and professional passivity which have contributed to the current hypertensive problems. Aims of the program are to educate both the lay and medical communities regarding the prevalence, complications, and necessity for treatment of essential hypertension. An alternate approach is being provided by fourteen demonstration projects sponsored by the National Heart and Lung Institute. These programs emphasize clinic reorganization, increased utilization of paramedical personnel, and finding ways to motivate patients toward complying with their therapeutic regimen and remaining under medical supervision.

Compliance is, Fries (1973:17) indicates, "the greatest roadblock to the successful long term treatment of hypertension. . . ." Wilber and Barrow (1972:660) in a hypertensive survey in Atlanta found that ". . . for each 100 persons screened twenty-five will be hypertensive, sixteen will reach a physician for diagnosis and treatment, eight will continue treatment, and four will achieve blood pressure control for at least one year." Because compliance

is such a significant problem the Joint Council/Community Program Task Force on Hypertension (1972:5) has recommended that the percentage of dropouts be one of the criteria for measuring the effectiveness of community and clinic programs designed to detect and treat hypertensive individuals.

#### Purpose of the Study

As nurses expand their roles and become increasingly instrumental and responsible in motivating individuals toward compliance it would seem beneficial to determine the areas in which the nurses' effort would prove most fruitful. If it can be determined why large numbers of individuals prematurely drop out of a long term treatment program then nurses can focus their intervention efforts in effective directions.

#### Statement of the Problem

This study sought answers to the following question. What factors influence a patient's decision to continue in or drop out of one long term nurse operated hypertensive outpatient treatment program?

#### Limitations

This study was limited by the following factors:

1. The sample selected from the Veterans Administration Hypertension Clinic was small and consisted only of adult males who met certain criteria.

2. The time available for data collection was limited to two months.
3. Patients' responses were restricted by a structured questionnaire.

### Theoretical Framework

The framework for this study is a composite of sociological and psychological concepts and theories. It is a framework for viewing man, his illness, and his illness behavior.

Wu (1973:16) states that illness has three relevant attributes only one of which need be present to indicate illness. These attributes are "an interference in performing one's usual daily activities, a feeling of not being well, and the presence of signs, symptoms, or changes in body structure and function." Utilizing this definition an individual with hypertension, even though asymptomatic, would be medically classified as ill simply because of the objective presence of an elevated blood pressure. Sweetser (1966:226) notes, however, that to a layman interference with one's usual activities is the most important factor associated with illness.

Illness behavior is defined as "behavior that is triggered by such cues as pain, discomfort, signs of malfunction, and/or by confirmation by word of mouth that the

individual, although presently asymptomatic, is experiencing illness" (Wu 1973:237).

In studying illness behavior Mechanic (1968:130) proposed ten broad variables that affect illness behavior and the process of help seeking. These variables which to some degree and combination are applicable in every illness include: the visibility, frequency, persistence, perceived seriousness, and disruptive effect of the symptoms; the patient's basic needs competing with the illness responses, the knowledge, understanding, and culture of those evaluating the patient; and the availability, accessibility, and monetary costs of treatment. (For a complete listing, see Appendix A.)

Given these determinants it is obvious then that there can be wide variation in response to illness, for the way an individual defines a situation and, therefore, makes a decision regarding his behavior is influenced by a multitude of physiological, psychological, social, and cultural factors peculiar to that individual. These factors shape an individual's perception of his illness, and determine his behavior. Unfortunately, subjective reality on the part of the patient often does not coincide with objective reality as defined by the health professional (Wu 1973:113). This can be particularly true in chronic disease such as hypertension where the disease is asymptomatic until the occurrence of cardiovascular complications. A symptomless state

without interference in one's activities provides little impetus for the patients to remain under medical care. This can be particularly detrimental in a situation where the long term consequences are so hazardous.

#### Assumptions

The assumptions underlying this study are:

1. The individual with hypertension is medically classified as being ill.
2. Essential hypertension is an asymptomatic disease which can be effectively controlled with medication and which requires periodic medical supervision over a prolonged period.
3. An individual's behavior is influenced by a multitude of physiological, psychological, social, and cultural factors peculiar to that individual.
4. An individual's perception of his illness may be congruent or incongruent with the statements and advice of health professionals.

#### Definitions

For purposes of this study the following terms are defined:

1. Dropout. An individual who has missed one or more appointments at the clinic so that more than three months have elapsed since his last visit. This

interval was selected since medicine is dispensed to last a maximum of three months.

2. Essential hypertension. Hypertension of unknown cause.
3. Compliance. This study is concerned with compliance as it relates to attendance at the clinic.

## CHAPTER 2

### REVIEW OF THE LITERATURE

Compliance is a complex subject and the literature dealing with it is voluminous. This chapter selectively reviews only the compliance literature pertaining to attendance behavior and long term treatment programs in ambulatory care settings. Nursing's role in relation to compliance is also briefly reviewed.

Three studies were located that dealt specifically with hypertensive patients. Finnerty, Mattee, and Finnerty (1973) interviewed 60 dropouts from four hypertensive clinics in the Washington, D.C., area. They found that the time expended by patients to obtain care, the patients' intelligence and understanding of the disease, and the patient/health professional relationship were the factors most influential in affecting the patients' attitudes. Consequently, the Georgetown Clinic was reorganized to provide 24 hour comprehensive, convenient service plus a personal physician/patient relationship. This reorganization reduced the dropout rate from 42 per cent in 1966-1969 to 8 per cent in 1970-1971.

Caldwell et al. (1970) investigated the social and emotional factors influencing a patient's ability to comply

with an antihypertensive regimen. They interviewed 64 patients: 24 who remained under medical care for an extended period and 42 who discontinued treatment and subsequently returned to the hospital for hypertensive emergencies. The following reasons were given for discontinuing treatment: 39 per cent felt well, 36 per cent felt they had poor instruction, and 35 per cent cited financial need. Less significant factors were advice of the physician, lack of family support, dissatisfaction, side effects of drugs, and discouragement. In contrast the control group had the following reasons for staying in treatment: good knowledge of the disease 71 per cent, knowledge of harmful effects of inadequate treatment 50 per cent, evidence of harmful effects of hypertension in the family 50 per cent. Additionally some statistically significant differences were found between the control and dropout group. The dropouts were younger, had their disease for a shorter length of time, had less education and income, and were more likely to be Negro blue collar workers. The researchers concluded that socioeconomic factors, learned responses, and education about the disease were the main factors influencing the patients' ability to comply with a therapeutic treatment program. To keep a patient in treatment these investigators recommended not only a good physician/patient relationship but also education for the patient and his spouse, with special emphasis on the poorly

educated and the needy. In addition, they stress the special need and importance of "continued encouragement and reeducation of those who feel well" (Caldwell et al. 1970, p. 591).

McKenney et al. (1973) conducted a study among 25 noncompliant hypertensives from one neighborhood comprehensive health program. These 25 were provided the services of a clinical pharmacist who discussed the disease and investigated adverse drug reactions with the patient. This group showed increased knowledge and compliance during the investigative period but reverted to noncompliant behavior afterwards. A control group of 25 remained noncompliant throughout. The investigators noted that patients were highly receptive to the services offered and suggested that a clinical pharmacist could be effective in gaining patient compliance.

Although the preceding investigators stress the importance of knowledge, a number of authors note that its role in compliance, even though extensively studied, remains unclear due to inconsistencies in the reports.

Tagliocozzo and Ima (1970) administered a knowledge test to 159 outpatient attendees with chronic illness to determine if knowledge had a relationship to attendance behavior. Overall they found that "patients with low knowledge scores were considerably more prone to terminate care prior to the fourth post diagnostic visit" (p. 768). However, they also stated that other factors and conditions

modify the role of knowledge and that "knowledge of illness and its consequences appears to be particularly relevant in the case of an illness characterized by few problems in self management, less past illness experience, and less demanding treatment" (p. 773). They concluded that knowledge predicted most effectively for hypertensive patients as opposed to the other three disease groups studied and suggested that "knowledge of illness can add the motivational component which is not directly supplied by other motivating conditions and orientations" (p. 773).

Marston (1970) also acknowledged the role other factors play in compliance. In reviewing the literature on this subject she concluded that "knowledge alone concerning illness and its treatment has not provided the motivation . . . to follow their regimens" (p. 320).

A study of four selected health education methods and their effect on appointment breaking was conducted by Glogow (1970) in relation to patients suspected of having glaucoma. No significant differences were found in the rates of broken appointments between instructed patients and the control group and Glogow concluded that "what is important in reducing broken appointments is not what the client is taught or told but the manner in which the information is conveyed . . . the client needs to feel that the staff of the facility is concerned about his welfare" (p. 448). Furthermore, Glogow noted that when the patient has

been persuaded by personal interest and tender loving care to return for followup care he will then be available for increasing in-depth education or training,

The importance of professional concern and interest was again stressed in another study conducted by Glogow (1970 - 1971) in which he attempted to make behavioral diagnoses to help explain why glaucoma patients failed to return for appointments. He found that reasons patients gave for failing to return were often related to mental health and that the elements of fear and denial were actively involved. In order to minimize broken appointments and maintain followup care he suggested not only concern on the part of the professional but also keeping appointments to a minimum and using written, telephone, or health aide reminders.

Like Glogow, Curry (1968) noted that the professional team is important in reducing the number of missed appointments. He reported on the decentralization of one chest clinic into three neighborhood centers staffed with a specialized district team. Six years after decentralization the missed appointment rate for TB followup dropped approximately 22 per cent. This decline was attributed not only to the convenience of the clinic relocation but also to the district teams who "viewed the patient as a complete entity, so that medical, social, emotional, and environmental

problems were reviewed in relation to the current illness" (p. 1266).

Nursing's role in relation to patient compliance has been reviewed by two nurse educators in recent years.

Marston (1970:312) stated that "problems of motivating . . . and encouraging people with known disease conditions to follow their physician's recommendations are appropriately of concern to nursing." The following year Vincent (1971:514) commented on a few of the many situational factors which are amenable to nursing intervention. These include structuring the physical factors (e.g., waiting room) to indicate that health facility personnel are interested in the patient, following up on missed appointments, and determining family support or non-support which is influential in directing the patient to compliant or non-compliant behavior. She concludes that one of the responsibilities of nursing is "to contribute to the patient's definition of the situation so that the resolution of the conflict is in the direction of compliance."

In the Modern Management of Hypertension Fries (1973:18) remarks that "gaining and maintenance of the compliance of the patient requires great skill, knowledge, tact, and a change in our present organization of outpatient clinics."

This brief literature review has shown that concern for patients' welfare by the professional plus a

comprehensive reorganization of outpatient services can have a substantial impact on the compliance behavior of the patient.

## CHAPTER 3

### METHODOLOGY

This chapter describes the methods used to determine why individuals, once informed that they have hypertension, cease attending the Tucson Veterans Administration Hospital Hypertension Clinic, while others, similarly informed, continue to attend.

#### Research Design

The research was descriptive in design utilizing a structured questionnaire and interview for data collection. Permission to conduct this investigation was obtained from The University of Arizona, Human Subjects Committee; the Tucson VA Hospital Research and Education Committee; and the Hypertension Clinic Medical Director (see Appendix B).

In addition, permission was obtained from each patient prior to the interview. All patients were informed of the researcher's graduate student status, the purpose of the study, that no hazards were involved, and that their participation or refusal would in no way affect their usual medical care. Furthermore, individual anonymity and confidentiality of replies was assured.

### Setting

At the time of the study the VA hypertensive clinic had been in operation 16 months and had 640 patients registered. Of these, less than one per cent were female. Patients generally came to the clinic by self referral, medical referral, or were walking in the hall past the Hypertension Clinic and were invited in by the clinic personnel to have their blood pressure taken. After a minimum of three screening blood pressures, individuals with diastolic blood pressures greater than 105mm of Hg were scheduled for an examination to see if the cause of the hypertension could be determined. This investigation included a history, physical examination, chest film, EKG, urinalysis, and serum electrolytes. Following diagnostic studies, individuals were placed on antihypertensive drug therapy except for the rare individual in whom a correctable cause for hypertension could be identified. Prescriptions given by the clinic staff were obtained by the patient at the pharmacy generally after a lengthy waiting period. Those choosing not to wait could have their medicines mailed to them. Frequency of followup appointments was correlated with the severity and degree of control of the hypertension with a maximum time interval of three months for a well controlled stable hypertensive.

The clinic was conducted by two nurse practitioners with a full time clerical assistant following policies and

guidelines of the clinic medical director and the Veterans Administration. Patients with hypertensive emergencies or presenting other problems in medical management, or with problems relating to hypertension but not covered by written directives were seen in consultation by resident physicians or the clinic medical director, or were admitted to the hospital.

#### Sample

The sample for this study consisted of two groups of individuals: (1) fifteen who continued to attend the VA hypertensive clinic on a regular basis, and (2) fifteen who failed to keep appointments and were classed as dropouts. No attempt was made to determine if individuals regularly attending the clinic were actually complying with their medical regimen as prescribed by the clinic staff.

Criteria for sample selection of attenders were:

1. men with hypertension,
2. currently and for the past year under medical supervision of the VA Hypertension Clinic,
3. primarily responsible for their own care,
4. living in the city or no more than five miles outside its limits, and
5. willing to be interviewed.

Criteria for sample selection of nonattenders were:

1. men with hypertension,

2. attended the VA Hypertension Clinic at least once and had not returned in more than three months,
3. primarily responsible for their own care,
4. living in the city or no more than five miles outside its limits, and
5. willing to be interviewed.

The dropout sample was selected in the following manner. Charts of 170 patients who had not returned in three months were first reviewed. Of these, 39 were dropouts meeting the study criteria. The remainder were either rescreenees, lived far out of town, or had medical or psychiatric problems rendering them incapable of self care. Initially, fifteen names were randomly chosen for inclusion in the study. When it was determined that an original selectee could not or would not participate another name was randomly selected until fifteen had been interviewed.

The sample of fifteen clinic attenders was not previously selected on the basis of records but was a convenience sample of individuals who had appointments at the time the researcher found it convenient to be at the clinic and to conduct interviews.

#### Data Collection Instrument

A questionnaire, compiled by the researcher and clinic medical director, was the basis for data collection. Some of the questions were the same as, or modifications of,

ones used by Finnerty et al. (1973) in their study in the Washington, D.C., area. The remaining questions were felt to be pertinent based on knowledge of clinic operations and reported findings in the literature. Identifying and demographic data were obtained from the chart prior to the interview and included the presence or absence of a behavioral diagnosis. The reason for the inclusion of information on behavioral diagnoses was the presumed high percentage of alcoholic and mentally ill patients in the VA outpatient clinic population. It was thought that behavioral problems identified outside the Hypertension Clinic might be significant factors in the dropout rate. The questions were categorized as follows:

1. Knowledge and understanding of the disease: 2, 3, 4, 5, 6, 7.
2. Clinic (appearance, operating hours, etc.): 13bd, 20, 21, 22, 30.
3. Patient/professional relationship: 16, 17, 18, 19.
4. Economy of time and money: 8, 9, 10, 11, 12, 13, 14.
5. Family and friends' influence: 13, 14, 15, 16.

The questionnaire (see Appendix D) was pretested several times and revised before the actual study began.

### Data Collection

Data collection utilizing identical interviewing techniques was conducted either in the home or clinic setting. Subjects were asked the questions, and answers were checked or written in by the researcher. However, for convenience questions 22, 29, and 30 were placed on separate sheets of paper and handed to the patient at the appropriate time. Regular clinic attenders were interviewed in an office adjacent to the clinic area on six different days until fifteen interviews had been completed. All interviews were privately conducted. None of the attenders who were asked to participate refused to do so.

The dropout patients previously selected for the sample were initially contacted by telephone or post card to determine willingness and ability to participate. Interviews were conducted in the home at a mutually agreed upon time. During the data collection phase twenty individuals were eliminated for the following reasons: moved without forwarding address--6, no response received to post card--2, subject contacted at a relative's home but had moved out of town--1, on extended vacations--3, hospitalized for alcoholism--1, returned to the clinic prior to contact by the researcher--1, no return call after the researcher talked with the subject's wife--2, died--1, refused to participate--3. Of these twenty, four had a diagnosis of alcoholism and three had psychiatric diagnoses.

### Data Analysis

Responses to each question were tabulated to establish frequencies and distribution of answers. A non-parametric chi-square test was used to statistically analyze the data. This method was chosen because it can be used to determine the significance of differences among groups that are compared in terms of qualitative variables (Abdellah and Levine 1965:350).

## CHAPTER 4

### PRESENTATION AND ANALYSIS OF DATA

This chapter presents the findings and analysis of the data collected by questionnaire from attenders and nonattenders at the Tucson VA Hypertension Clinic.

#### Characteristics of the Sample

The sample consisted of thirty patients, equally divided into attenders and dropouts. A summary of the sample characteristics including age, marital status, education, employment status, behavioral diagnosis, months attended the clinic, total visits, attendance at other clinics, and initiation of referral to the clinic is presented in Tables 1 and 2.

Ages of attenders ranged from 41 to 78; nonattenders ranged from 27 to 76. Sixty-six per cent of the total sample were between the ages of 50 and 67. All the patients were married except for one widower in each group. The educational level ranged from eighth grade completed to one fulltime doctoral candidate. Seven dropouts but only two attenders had more than a high school education. The two individuals with the most formal education (a master's and a Ph.D. student) were not only nonattenders but also had discontinued taking medication. Six nonattenders and seven

Table 1. Characteristics of the Attenders Including Age, Marital Status, Years of Education, Employment Status, Behavioral Diagnosis, Months Attended Clinic, Total Visits, Attendance at Other Clinics, and Initiation of Referral to the Clinic

I.D. #	Age	Marital Status	Years of Education	Employed	Behavioral Diagnosis	Months Attended Clinic	Total Visits	Attendance at Other Clinics	Initial Referral to the Clinic by
1	41	married	14	yes	no	16	16	no	clinic staff
2	50	married	12	yes	no	16	12	no	clinic staff
3	78	widowed	11	retired	no	17	18	yes	clinic staff
4	63	married	10	yes	no	12	9	no	self
5	52	married	12	retired	no	12	9	no	self
6	65	married	12	retired	no	17	17	no	M.D.
7	60	married	10 <sup>a</sup>	retired	no	16	18	yes	M.D.
8	44	married	13	yes	no	12	8	no	self
9	57	married	16	yes	no	18	15	yes	M.D.
10	67	married	12	retired	no	13	8	yes	clinic staff
11	56	married	8	yes	no	16	17	yes	M.D.
12	65	married	9	retired	no	12	6	no	M.D.
13	73	married	12 <sup>a</sup>	yes	no	12	8	no	M.D.
14	56	married	8	retired	yes <sup>b</sup>	12	8	yes	M.D.
15	48	married	12	yes	no	14	10	yes	M.D.

<sup>a</sup>In addition to two years of high school, this patient had two years of business school.

<sup>b</sup>This patient had a behavioral diagnosis of inadequate personality.

Table 2. Characteristics of the Nonattenders Including Age, Marital Status, Years of Education, Employment Status, Behavioral Diagnosis, Months Attended Clinic, Total Visits, Attendance at Other Clinics, and Initiation of Referral to the Clinic

I.D. #	Age	Marital Status	Years of Education	Employed	Behavioral Diagnosis	Months Attended Clinic	Total Visits	Attendance at Other Clinics	Initial Referral to the Clinic by
1	27	married	PhD student	student	no	<1	3	no	clinic staff
2	62	married	12	yes	no	8	6	yes	clinic staff
3	40	married	12	yes	no	5	8	no	M.D.
4	53	married	8	yes	no	13	9	yes	M.D.
5	43	married	Masters	yes	no	3	7	no	M.D.
6	62	married	14	retired	no	<1	1	yes	M.D.
7	55	married	12	yes <sup>b</sup>	no	3	3	yes	self
8	60	widowed	12	retired	no	12	16	yes	M.D.
9	66	married	16	retired	no	11	8	yes	M.D.
10	58	married	14	yes	no	5	9	yes	M.D.
11	62	married	13	retired	no	1	3	yes	M.D.
12	37	married	12	yes	yes <sup>c</sup>	4	5	yes	M.D.
13	65	married	16	retired	no	1	3	yes	self
14	54	married	12 <sup>a</sup>	yes <sup>b</sup>	no	13	7	no	clinic staff
15	76	married	8	retired	no	<1	2	yes	M.D.

<sup>a</sup>In addition to high school this patient had two years of business college.

<sup>b</sup>These individuals were self employed.

<sup>c</sup>This patient had a behavioral diagnosis of schizophrenia.

attenders were retired. All others were employed except for the one fulltime student. Of the two subjects having a behavioral diagnosis, one was an attender who had a diagnosis of inadequate personality listed on his chart and the other was a nonattender with a diagnosis of schizophrenia.

In addition to demographic characteristics the following data relating to clinic visits was obtained. Referral to the clinic was of three types. Individuals were either passing in the hall and invited in by the clinic staff to have their blood pressure determined, referred themselves, or were medically referred by a physician in another hospital clinic. All three types of contact occurred in both groups and in approximately equal numbers.

Clinic attendance ranged from less than one month to thirteen months for the nonattenders and twelve to eighteen months for the attenders. Nonattenders made one to sixteen visits; attenders made six to eighteen. Seven of the attenders were regularly attending another VA clinic as were eleven of the nonattenders. Of these eleven nonattenders, seven were obtaining antihypertensive medication through these other clinics.

#### Findings Related to Knowledge

Questions two through seven tested the subjects' knowledge and understanding of hypertension. The highest

possible score was ten; actual scores ranged from zero to nine. Twelve of the dropouts and all of the attenders scored five or above. The scores of zero, two, and three were obtained by dropouts who attended the clinic less than one month and who had made one to three visits to the clinic. All three were taking hydrochlorothiazide prescribed in another clinic. Although each stated it was a water pill not one knew it was also given to reduce a high blood pressure. Results of the test were submitted to chi-square analysis and were not statistically significant. Table 3 indicates the number of correct scores for each individual question.

One individual in each group thought that hypertension was nerves and one nonattender felt hypertension was not serious since he felt all right. The remaining incorrect responses were in the "don't know" category. Accepted right answers for why is it serious were specific effects on the heart, kidney, and stroke. Vague responses such as "it messes up the body" were considered incorrect. Headaches and dizziness were frequently given as symptoms of hypertension. Only one nonattender felt that he did not have to take medication daily; the other nonattender was not sure. Regarding the need for lifetime medication eleven attenders and seven nonattenders knew that they would have to take medication for the rest of their lives; however two nonattenders thought drugs should be taken until their

Table 3. Number of Correct Responses to Knowledge Questions

Question	Attendees	Non-attendees
Definition of hypertension.	12	11
Is it serious?	15	13
Why is it serious?	12	7
Seriousness of hypertension compared to		
a cold	15	12
sugar diabetes	6	6
heart disease	5	4
flu	14	11
A person can tell he is hypertensive from his symptoms.	7	9
Need to take medication daily.	15	13
Need for lifelong medication.	11	7

blood pressure was normal, one attender and three non-attenders thought they could be cured, and the remainder who missed this question were unsure.

A percentage summarization of responses comparing the seriousness of hypertension to four other diseases is presented in Table 4. These questions without the "don't know" category were used by Finnerty et al. (1973) in their study of hypertensive dropouts and findings from that study are also presented in Table 4. Two diseases, cold and the flu, were considered to be less serious than hypertension. Because diabetes mellitus and hypertension are both chronic diseases and controllable with medication the correct response was "about the same." Heart disease represents end organ damage and, therefore, was considered more serious than hypertension.

#### Findings Related to Economy of Time and Money

In this study total time involved in attending the hypertensive clinic was divided into four phases: traveling to and from the clinic, waiting to be seen, talking with the nurse, and waiting to have prescriptions filled. The only time factor to show a statistically significant difference between the two groups was time waiting to be seen. Thirteen attenders stated that they averaged less than five minutes waiting time; the remaining two waited five to ten minutes. In contrast only four of the nonattenders stated

Table 4. Percentage Summarization of Responses Comparing Seriousness of Hypertension to Four Other Diseases

	More Serious Than Hypertension	Less Serious Than Hypertension	The Same as Hypertension	Don't Know <sup>b</sup>
The seriousness of a cold is	0% (2.5%) <sup>a</sup>	90% (95%)	3.3% (1%)	6.7%
The seriousness of sugar diabetes is	20% (26.7%)	13.3% (26%)	40% (44%)	26.7%
The seriousness of heart disease is	30% (21.5%)	6.7% (4%)	46.7% (71.7%)	16%
The seriousness of flu is	3.3% (8.7%)	83.3% (68%)	3.3% (13%)	10%

<sup>a</sup>All figures in parentheses are percentages obtained in Finnerty's (1973) study in Washington, D. C.

<sup>b</sup>A Don't Know column was not used in the Finnerty study.

they waited less than five minutes, six waited up to ten minutes, and four waited twenty to thirty minutes. By a chi-square analysis this was significant at the .01 level.

The remaining time factors were substantially the same for both groups. All patients lived within twenty miles of the clinic, twenty-seven came by private automobile, and only one person said it took more than 60 minutes to travel round trip. Twelve persons in each group spent five to twenty minutes talking with the nurse and ten subjects in each group spent one-half to one and one-half hours waiting for their medications at the pharmacy. To avoid this lengthy delay six individuals had their medications mailed to them and two left their prescriptions and returned later in the day to pick them up. Seven non-attenders and two attenders said they would like to see a decrease in the amount of waiting time for pharmacy service and five individuals in each group felt that dispensing medicines through the clinic would be beneficial.

Employment was an additional factor related to both time and money. Eight persons in each group were employed and one nonattender was a doctoral student. Five attenders and four nonattenders had to miss work to attend the clinic but no one felt that he would lose his job because of this. Based on the total numbers of fifteen there was no significant statistical difference between the two groups. It was noted that the five nonattenders who were no longer taking

medication were either employed or a student having full-time, daytime commitments. The amount of time to obtain care conflicting with job responsibilities was influential in these persons dropping out of the program. Three of these five individuals felt that opening on Saturday or in the evening would be helpful.

#### Findings Related to Personnel

Open ended questions related to personnel were first asked. Then the interviewee was asked to rate the personnel in each category as good, fair, or poor. Each attender rated the personnel on all four questions as good. Two dropouts rated fair on helpfulness and health care given but both noted that they had attended in the early organizing phases of the clinic and they felt that the confusion of organizing was an extenuating circumstance. The other individual rating the health care as fair had psychiatric difficulties and side effects to the drugs prescribed. Seven of the attenders and six of the dropouts stated that the personnel were what they liked best about the clinic. Interestingly, all nonattenders and ten attenders said they had no preference as to who did their hypertensive checkup. Reasons given for this were that the equipment was automatic, easily readable, with little skill involved, and that the personnel must be competent otherwise they would not be working there. Four attenders preferred a nurse and one

an M.D. This latter individual was the only one who said he felt cheated because he did not routinely see a physician.

Findings Related to Influence  
From Others

As with many of the previous findings there was no statistical significance between the two groups in this category. Nine dropouts and ten attenders knew at least one other person with hypertension but no one felt that this influenced their behavior in any way. Only two individuals mentioned someone being influential in their decision to continue in the clinic. One man's wife reminded him of his appointments and the other individual credited the clinic staff with his coming back, saying, "If they are interested in me then I should certainly be interested in myself and come back when they say." In the dropout category four persons were influenced by medical personnel. One was advised by his psychiatrist to discontinue medications, two individuals were told by other physicians that they no longer need to attend the hypertension clinic because their BP was controlled and they would supply them with further medication. The remaining person had not been told to return to the clinic after a hospitalization.

Findings Related to the Clinic

Thirteen persons responded that the personnel was the element they liked most about the clinic. Another ten

gave answers relating to the quality of health care given. Waiting at the pharmacy was the thing cited as least liked. These responses were evenly divided between the two groups. When asked what they would change two nonattenders and eight attenders said they would not change anything. Two nonattenders and one attender would enlarge the clinic to give the staff room, while one nonattender stated it needed more room to accommodate his wheelchair. Seven nonattenders including four who no longer were taking medication and two attenders wanted to decrease the time to obtain medication. Only two individuals, one in each group, felt that they would like more instruction in hypertension. In order to decrease broken appointments and to reduce the number of patients dropping out five individuals in each group thought that opening evenings and Saturdays would be helpful. Individuals who opposed these ideas did so on the basis that the staff worked hard enough and deserved their weekends and evenings free. In addition, they claimed that anyone truly concerned about his condition would find time to get to the clinic when it was open. Seven nonattenders and only one attender felt that reminders would be worthwhile.

Reasons Cited for Attending or Not  
Attending the Clinic

The reasons given by attenders for continuing in treatment fell into five categories. These were: good quality health care, convenience, the personnel, free care,

and an "I belong here" attitude. Subjects were allowed to make multiple responses and those who did so generally coupled free care with either the health care or personnel. In no case was free care mentioned first. In fact, two persons mentioned that they could afford other care but felt it was unnecessary because of the excellent health care and personnel in the hypertension clinic. Table 5 lists the number and percentage of individuals responding to each category.

Table 5. Reasons Cited by Attenders for Continuing in the Hypertensive Treatment Program (Multiple Responses Accepted)

Reasons	Number of Patients Responding	Percentage
Convenience <sup>a</sup>	3	20%
Good health care	5	33.3%
Personnel	7	40.6%
Free care	7	40.6%
I belong here	2	13.3%

<sup>a</sup>Individuals citing this response were either businessmen dealing with the VA or employees of the hospital.

In contrast the five individuals who in addition to not attending the clinic had stopped taking medication of their own volition had the following reasons for not continuing in treatment.

Nonattender number one was too busy with school to go back. He had made three visits in less than one month, he felt fine and since hypertension is a "lifelong thing" he decided he had plenty of time to "do something about it" when he was less busy.

Nonattender number two also felt well but experienced unpleasant side effects from the pills. He had a BP cuff at home and periodically took his blood pressure. If his blood pressure was consistently high then he would "think about going back."

Nonattender number three attended eight times in five months. He also felt well and was too busy with new job responsibilities to return to the clinic.

Nonattender number four attended the clinic for thirteen months. He scored five on the knowledge test, and was the only individual to say that he did not think one had to take antihypertensive medication daily. He felt well, took medication sporadically, and planned to return to the clinic only when he began to "feel poorly."

Nonattender number five made seven visits in three months. He too had no time because of job responsibilities. He stated he could ignore the high blood pressure because

he felt well. He claimed he didn't like to take drugs and that he felt worse on two of the three antihypertensive medications he tried.

The ten remaining nonattenders were still taking medication except for the patient with the psychiatric diagnosis. One person had been given a five month supply of medicines but had been told to return for followup in three months. Feeling well he decided not to return until his supply of medication was exhausted. Another individual was taking a medication not supplied by the VA. He was under medical supervision at the military hospital. Four patients were obtaining antihypertensive prescriptions from physicians in other clinics at the Tucson VA Hospital. Not one of these four expressed any dissatisfaction with the hypertension clinic. Their decisions not to return were based on the fact that they had to attend these other clinics for other medical problems and the doctors in these clinics were willing to give them prescriptions for antihypertensive medication thus saving the patient the time and trouble of attending two clinics.

Lastly, were the two nonattenders who apparently did not understand that they were to return for followup appointments and the one individual who had been hospitalized and not been instructed post hospitalization to return to the Hypertension Clinic. All three were taking hydrochlor-thiazide prescribed by a physician in another clinic. None

of these three knew that this drug was used for high blood pressure. Table 6 summarizes the number and responses of patients who dropped out of the hypertensive program.

Table 6. Reasons Cited by Dropouts for Not Returning to the Clinic

Reasons	Nonattenders Taking Medication N=10	Nonattenders who Discontinued Medication N=5
Felt well	1	5
Too busy--interferes with work	1	3
Side effects of medication	1	2
Misunderstood directions	2	
Not told to return after hospitalization	1	
Obtaining pills from another clinic	5	

#### Summary

The findings of this study were divided into categories related to demographic variables, knowledge, economics of time and money, personnel, clinic, and influence from others. There was little difference between the attenders and nonattenders except that nonattenders tended

to have more years of formal education. Only waiting time to be seen proved to be statistically significant between the attenders and nonattenders. Significance was at the .01 level as determined by a chi-square analysis. Positive influences on attendance behavior were the personnel, free care, and good quality health care given. By contrast, deterrent influences were noted as feeling well, unpleasant side effects of medications, long waiting times, and job responsibilities conflicting with clinic hours.

## CHAPTER 5

### DISCUSSION OF FINDINGS

This chapter relates the findings to the theoretical framework and the literature review. In addition, findings considered unique to this study are presented.

#### Comparison of Findings to Theoretical Framework and Literature Review

##### Demographic Variables

There was little demographic difference between the two groups except in the area of education. The nonattenders were generally better educated and the two most educated were fully non-compliant in that they had discontinued medication of their own choosing. In a review of literature on compliance Marston (1970:317) summarized demographic variables as ". . . rarely predictive of compliance with medical recommendations." She further noted that education and compliance have little association since some researchers find that increasing education is related to compliance and others find it is related to non-compliance. Although a tendency seems to be emerging in this study the small sample size precludes making a judgment.

### Knowledge of Illness

The majority of patients were fairly well informed about hypertension and total scores on knowledge questions showed no statistically significant differences between the two groups. In this study it appears that increased knowledge was unrelated to attendance behavior or compliance in taking prescribed medications. Indeed, one black individual who on his own had ceased taking medication was well informed about the seriousness and consequences of hypertension, particularly in the Blacks; yet he chose not to comply. This parallels evidence found by Glogow (1970) in his study on health education methods and Marston's (1970: 320) statement that "knowledge alone concerning an illness and its treatment does not provide the motivation for a patient to follow his regimen." This also supports Etzioni's (1972) contention that attempting to change an individual's habits or behavior by exhortation and education is less productive of positive behavioral change and/or compliance than rearranging the environment or circumstances surrounding that individual thereby making it more convenient for him to comply.

### Activity Interference

It was pointed out in the theoretical framework that laymen associate illness with an interference of their usual activities (Sweetser 1966:226). Likewise, Mechanic

(1968:130) has stated that visibility and perceived seriousness of symptoms, their disruptive effect, competing basic needs, and accessibility and availability of treatment resources all influence help seeking. For the five non-attenders who had discontinued antihypertensive therapy, job responsibilities conflicting with clinic hours and a sense of being well were more salient motivating factors than their knowledge about hypertension. This factor of feeling well is identical to the finding in Caldwell et al.'s (1970) study of hypertensive dropouts.

#### Influence of Family and Friends

Another factor investigated in this study was the influence of family and friends on attendance behavior. This variable also showed no statistically significant difference between the two groups. Although nineteen patients knew someone else with hypertension none felt this influenced their behavior. Except for the few citing medical personnel and the one man indicating his wife most subjects stated that their decision to remain in or drop out of the program was solely their own. Conceivably, education of family members or friends as recommended by Caldwell et al. (1970:591) might provide an additional motivational element influencing potential noncompliant patients to remain under medical care.

### Time Needed to Obtain Care

In the literature review it was noted that time expended to obtain care was an important influence affecting patients' attitudes toward the clinic (Finnerty et al. 1973). Indeed, the major irritant expressed by patients in this researcher's study was the long delay at the pharmacy. Three of the five patients no longer taking medication mentioned this wait. Since they all had job responsibilities conflicting with the clinic hours, a long waiting period at the pharmacy intensified the problem leading to their dropping out of the program. These individuals felt, as did a number of other patients, that any method to reduce the waiting time including dispensing medicine from the clinic would be helpful. Whether these patients were aware of the mail service is unknown.

An additional time factor, and the only one having statistical significance, was the amount of time spent waiting to be seen by the nurse. It was noted, however, that two of the patients who said they averaged more than twenty minutes in waiting dropped out of the program during the early phases of the clinic operation. Almost all the current attenders waited no more than ten minutes and most said it was less than five indicating that a continued refinement of operations has eliminated this problem.

The effect of Monday through Friday, 8 a.m. to 4 p.m. operating hours has already been mentioned as having

an adverse effect on attendance when conflicting with employment. It was interesting to note that patients who opposed the idea of opening in the evening or on Saturday did so on the basis of staff rather than consumer need. In addition, other comments indicated that a number of patients felt that anyone truly concerned about his condition would find or make time to come to the clinic when it was open.

#### Financial Concerns

Besides waiting time, another potential problem area in any health care delivery system is finances. VA care for eligible persons is free and this fact was mentioned by 40.6 per cent of the attenders as being a secondary reason for attending the clinic. Primary reasons mentioned were the good health care and the personnel. Money not earned because of lost, uncompensated work time and the threat of being fired did not appear to be influencing factors upon attendance behavior. Similarly, Finnerty et al. (1973) found that economic costs were not a major factor in non-compliance but rather the critical factor was the total amount of time spent in waiting.

#### Patient Professional Relationships

The importance of a good patient professional relationship in keeping patients under care has been stressed by many researchers including Finnerty et al. (1973), Caldwell et al. (1970), Glogow (1970), and Curry (1968). In this

study patient professional relationships, with only two exceptions, were highly rated by both attenders and non-attenders. Patients viewed the staff as helpful, interested, and providing good quality health care. Patients were very accepting of being treated by a nurse and only one patient felt cheated because he did not routinely see a physician. Although seven patients cited the personnel as one reason they kept coming back and thirteen stated that the personnel were the element they liked best about the clinic a majority of the patients expressed no preference in the type of health professional they wanted to see for their hypertensive checkup. Reasons spontaneously given for this answer were: the machine was automatic, took little skill to operate, was easily readable, the staff must be competent or they wouldn't be there, and the knowledge that if a problem did arise a physician would be consulted.

#### Findings Unique to This Study

Three findings are considered unique to this study because of the nature of the VA health care delivery system and the population it serves.

First, as was mentioned earlier, the VA has a high incidence of alcoholism among its outpatient population. Although this was not a significant factor among the drop-outs interviewed it was noted that four of the twenty drop-outs this researcher attempted to contact and eventually

eliminated during the data collection phase had a behavioral diagnosis of alcoholism and three had psychiatric problems. Since these patients were not interviewed for a number of reasons it is impossible to say what role, if any, these diagnoses had in their dropping out of the program.

Another finding which is interesting and, at first, appears somewhat contradictory is the fact that most patients although rating the personnel very highly and, indeed, said they were one of the reasons they returned expressed no preference when asked who they preferred for their hypertensive checkup. Logically it would seem that patients so favorably impressed with the nurses would prefer nurses if given a choice. Whether this difference is due to the wording of the question, the patients' perception that hypertension really does not need the expertise of a professional, or is a reflection of the patients' previous exposure to the military health care system which makes extensive use of paramedical personnel is unknown.

The third finding considered unique resulted from a combination of factors including aging and its concomitant diseases, limited intelligence and comprehension, and the need to attend multiple specialty clinics for a variety of medical problems and disabilities. The three dropouts who scored three or less on the knowledge test and made only one to three visits to the clinic were in their early sixties or late seventies. Not only did their scores reflect a lack of

knowledge about hypertension, their manner and remarks indicated they were confused regarding the disease. They all questioned whether they had hypertension since they could not feel it and, although medically referred, not one could say why he had to go to the Hypertension Clinic. Their reasons for dropping out were varied. One interviewee said that he was in the hospital at the time of his appointment. Post discharge no one told him to return to the Hypertension Clinic, so he did not return. Another individual claimed he returned for his second appointment, waited in the lobby six hours for someone to call his name and when it became obvious that the clinics were closed, returned home. He never questioned his long wait nor made another appointment. The third individual apparently misunderstood directions about returning for he appeared surprised when this researcher told him he should have returned for a second appointment. All three of these persons had multiple drugs in their homes including hydrochlorothiazide. Not one of these individuals knew that this was an antihypertensive drug.

## CHAPTER 6

### CONCLUSIONS AND RECOMMENDATIONS

Findings from this study generally tend to parallel findings of similar studies cited in the literature review. The personnel, free care, and good quality health care had a positive influence on attendance behavior. Feeling well, unpleasant side effects of medications, long waiting times, and job responsibilities conflicting with clinic hours tended to have a deterrent influence on attendance and compliance with a therapeutic regimen. Demographic characteristics were not significantly different between groups and more knowledge about hypertension was not generally associated with compliant behavior. Little social support was noted from family and friends.

It appears that to treat and then gain compliance of large numbers of hypertensive patients, health professionals must change ways of delivering health care. A comprehensive service with varied hours, little waiting time, and a staff having genuine interest in the patients would be basic requirements. In addition nurse operated clinics with guidelines for treatment established by the physician, and increased utilization of paramedical personnel is an

effective and acceptable method of rendering medical supervision to large numbers of hypertensive individuals.

Based on findings and conclusions the following recommendations are made for nursing care.

Feeling well is not a strong motivational force toward compliance in patients with hypertension who usually have no change in their sense of well being after stopping antihypertensive drugs. Nurses must be cognizant of this fact and take special care to encourage these patients to comply with their medical recommendations.

Patients should be provided with information as to the side effects of drugs and how long these effects can be expected to occur. In addition, they should be informed that if they experience side effects from one drug there is a vast array of others from which to choose.

Waiting times should be kept to a minimum. This is especially important for employed patients where time is valuable and waiting means time lost from work. Methods should be tried with the pharmacy to decrease the lengthy delay at this institution.

Patients who are elderly, confused, follow directions poorly, and lack understanding should have medical contacts limited to a few individuals. Numerous clinics each geared to a specific disease and conflicting instructions from different professionals tend to further confuse these individuals in addition to presenting a hazard with multiple

prescriptions for the same or similar drug. These individuals may benefit from a home visit of a community health nurse to determine exactly what the patient is taking.

Recommendations for further study are:

1. Home interviewing of elderly patients attending multiple clinics to ascertain medical regimens.
2. Further studies of nonattenders to determine their reasons for noncompliance.
3. A similar study be done at another hypertension clinic.
4. A study of influencing factors on hypertensive patients' compliance/noncompliance from a private practice setting.

## APPENDIX A

### THE VARIABLES AFFECTING ILLNESS BEHAVIOR

1. The visibility, recognizability or perceptual salience of deviant signs and symptoms,
2. the extent to which the symptoms are perceived as serious,
3. the extent to which symptoms disrupt family, work or other social activities,
4. the frequency of the appearance of the deviant signs or symptoms, the persistence or their frequency of recurrence,
5. the tolerance threshold of those who are exposed to and evaluate the deviant signs and symptoms,
6. the available information, knowledge and cultural assumptions and understandings of the evaluator,
7. basic needs which lead to autistic psychological processes,
8. needs competing with illness responses,
9. competing possible interpretations that can be assigned to the symptoms once they are recognized,
10. availability of treatment resources, physical proximity, and psychological and monetary costs of taking action (Mechanic 1968:130).

APPENDIX B

LETTERS GRANTING APPROVAL TO CONDUCT STUDY

April 26, 1974

Ms. Barbara A. Rezac  
Department of Nursing  
Campus

Dear Ms. Rezac,

Your proposal entitled "Selected Factors Influencing a Patient's Decision to Remain in or Drop out of a Hypertensive Treatment Program" has been reviewed and conditionally approved by the Human Subjects Committee with one suggestion. The measures to be taken to insure the confidentiality of the information and the anonymity of the subject should be indicated.

As soon as we have received a copy of this change in your proposal we will make final approval.

Sincerely,

/s/

Thomas Weaver, Ph.D.  
Chairman  
Human Subjects Committee

TW:ar

cc: Dr. Ewy

May 6, 1974

Miss Barbara Rezac  
1902 S. Aida  
Tucson, AZ 85710

Dear Miss Rezac,

The Human Subjects Committee has reviewed and approved the changes in your proposal entitled "Selected Factors Influencing a Patient's Decision to Remain in or drop out of a Hypertensive Treatment Program." This letter constitutes final approval of your proposal effective May 6, 1974.

The Human Subjects Committee is available for consultation on any problems involving the use of human subjects, and further you are advised that any changes in the procedures in your approved proposal require review by the Committee. You must also report any physical or psychological harm to the subjects which results from their participation in the study.

If there are any further questions, please feel free to call or write.

Sincerely,

/s/

Thomas Weaver, Ph.D.  
Chairman  
Human Subjects Committee.

TW:ar

cc; Dr. Kassander

VA Hospital  
Tucson, Arizona 85723

Date: March 1, 1974

To : Barbara A. Rezac, RN  
From : Secretary, R and E Committee  
Subject: Research Proposal

1. This is to inform you that your research proposal, "Selected Factors Influencing Patient's Decision to Remain in or Drop out of a Hypertensive Treatment Program" submitted by you to the R and E Committee, was approved by the committee at its meeting on February 26, 1974, pending Human Studies Committee approval.

Your project has been assigned the following code number: 01  
This number should be used to identify it in all future communications.

2. An initial report is required by Central Office as of the moment work is begun on this project. If work is delayed pending acquisition of personnel, funds, or equipment, the initial report should be delayed until this is completed.

3. We are attaching several forms and instructions for your use. Please contact the Research office for additional forms or assistance.

/s/

A. H. Woods, M.D.

APPENDIX C

PATIENT'S CONSENT FORM

## CLINICAL RECORD

Clinical Research  
as approved by the  
Committee on Human  
Research

## VOLUNTEER'S CONSENT

Title: Selected Factors Influencing a Patient's  
Decision to Remain In or Drop Out of a Hypertensive  
Treatment Program

Number

RESEARCH  
PROCEDURE  
DESCRIPTION  
(Specify the  
required data)

The purpose of this study is to find out why some hypertensive patients continue to come to the hypertensive clinic regularly while others do not. In comparing the findings we hope to be able to improve the care of our patients. Data will be collected by interview which should take no more than 15-30 minutes of your time. There are no hazards associated with the interview and you will receive no direct benefit. You are free to refuse to participate. Whether you participate or refuse this study will in no way interfere with your usual medical care. You will remain anonymous and your individual replies will be kept confidential. Answer sheets will be identified only on the basis of attendance; no names will be used. Raw data will be tabulated and presented in such a manner that no one individual will be able to be identified.

PROCEDURE DEMANDS  
AND DISCOMFORTS

(Circle those items  
which are applicable.  
In the space opposite,  
enter Item No. and  
describe the item in  
lay terms.)

Use reverse side if ad-  
ditional space is needed.

- |   |                  |
|---|------------------|
| 1. Restriction of Activity                                | 14. 15-30 minute |
| 2. Restriction of Diet                                    | 15. interview    |
| 3. Drug Effects   |                  |
| 4. Intravenous or Subcutaneous<br>Administration of Drugs |                  |
| 5. Blood Test (estimate frequency)                        |                  |
| 6. Urine Collection                                       |                  |
| 7. Stool Collection                                       |                  |
| 8. Use of Catheter (specify)                              |                  |
| 9. Exposure to Virus                                      |                  |
| 10. Exposure to Cold                                      |                  |
| 11. Biopsy  |                  |
| 12. Possible Symptoms                                     |                  |
| 13. Possible Hazards                                      |                  |
| 14. Study will take <u>1/48</u> day                       |                  |
| 15. Other (specify)                                       |                  |

## AUTHORIZATIONS

The nature and demands of the study have been clearly explained to me and I understand and accept the hazards involved. I also understand that if some unforeseen complication occurs, it, too, is considered to be one of the hazards of being a volunteer. Furthermore, I understand that I may withdraw from the study if I find that I am unable to continue.

Volunteer's Signature

Date

I have carefully explained the nature, demands, and foreseeable risks of the above study to the volunteer.

Investigator's Signature

Date

Patient identification (Name, Unit No., Birthdate, sex, race, department location)

APPENDIX D

QUESTIONNAIRE

Demographic Data

Age \_\_\_\_\_

Education \_\_\_\_\_

Occupation \_\_\_\_\_

Marital status \_\_\_\_\_

Date began with clinic \_\_\_\_\_

Date of last visit (dropped out) \_\_\_\_\_

Total visits \_\_\_\_\_

Behavioral diagnosis \_\_\_\_\_

Regular attendance at other clinics \_\_\_\_\_

Questionnaire

1. Why did you originally go to the hypertension clinic?

\_\_\_ passing in hall--nurse asked me in

\_\_\_ medical referral            \_\_\_ self referral

\_\_\_ friends referral            \_\_\_ other \_\_\_\_\_

2. What do you think hypertension is?

\_\_\_ high blood pressure    \_\_\_ nerves    \_\_\_ don't know

\_\_\_ other \_\_\_\_\_

3. Do you think hypertension is a serious problem?

Yes, because \_\_\_\_\_

\_\_\_\_\_

3. (Cont.)  
 No, because \_\_\_\_\_  
 \_\_\_\_\_
4. Do you think hypertension is more, or less, or about the same in seriousness as a
- |                   |                                     |
|-------------------|-------------------------------------|
| a. cold           | more/less/about the same/don't know |
| b. sugar diabetes | more/less/about the same/don't know |
| c. heart disease  | more/less/about the same/don't know |
| d. flu            | more/less/about the same/don't know |
5. A person can usually tell from symptoms whether or not he has high blood pressure.  
 \_\_\_ true \_\_\_ false \_\_\_ don't know
6. Does a person with hypertension who feels well have to take his medicine every day?  
 \_\_\_ yes \_\_\_ no \_\_\_ don't know
7. How long can a hypertensive person usually expect to take medicine for his hypertension?  
 \_\_\_ until cured \_\_\_ until his BP is normal  
 \_\_\_ until his MD says to stop \_\_\_ until he feels well  
 \_\_\_ rest of his life \_\_\_ other \_\_\_\_\_
8. How many miles away from the clinic do you live?  
 \_\_\_ live on premises \_\_\_ miles
9. How do you get to the clinic?  
 \_\_\_ auto \_\_\_ taxi \_\_\_ bus \_\_\_ walk  
 \_\_\_ government transportation \_\_\_ other \_\_\_\_\_
10. Are you employed outside your home? \_\_\_ yes \_\_\_ no
11. (If #10 yes) Must you miss work to attend the clinic?  
 \_\_\_ yes \_\_\_ no

12. (If #11 yes)
- a. Do you get paid sick leave when you miss work?  
 \_\_\_yes \_\_\_no
- b. Are you afraid you will get fired because you miss work?  
 \_\_\_yes \_\_\_no
13. What is the average amount of time you spend in (minutes):
- a. getting to and from the clinic (round trip) \_\_\_\_\_
- b. waiting to be seen in the clinic \_\_\_\_\_
- c. talking with the nurse \_\_\_\_\_
- d. waiting for the medication at the pharmacy \_\_\_\_\_
14. Do you think you go (went) to the clinic
- a. \_\_\_often enough            b. \_\_\_too often
- c. \_\_\_not often enough
15. How often would you like to go to the clinic? \_\_\_\_\_  
 why? \_\_\_\_\_
16. If you had a choice would you rather be seen by
- a. the same health professional each time \_\_\_
- b. the person who could see you the soonest \_\_\_
17. Would you rather have your hypertensive checkup by a
- a. doctor \_\_\_                    c. nursing assistant \_\_\_
- b. nurse \_\_\_                      d. no preference \_\_\_
18. How would you describe the personnel in the hypertension clinic in terms of
- a. How they treat you as a person \_\_\_\_\_  
 \_\_\_\_\_ good, fair, poor.

18. (Cont.)

b. health care given \_\_\_\_\_  
 \_\_\_\_\_ good, fair, poor.

c. interest in patients \_\_\_\_\_  
 \_\_\_\_\_ good, fair, poor.

d. helpfulness \_\_\_\_\_  
 \_\_\_\_\_ good, fair, poor.

19. Do you feel cheated because in this clinic you don't see a doctor?

\_\_\_yes \_\_\_no

20. What do you like most about going to this clinic? \_\_\_\_\_  
 \_\_\_\_\_

21. What do you like least about going to this clinic? \_\_\_\_\_  
 \_\_\_\_\_

22. Which of these would you change if you could and how would you change it (put 1 after the most important change, 2 after the next important, etc.)

a. \_\_\_appearance of the clinic

b. \_\_\_number of times you come in

c. \_\_\_hours of clinic operation

d. \_\_\_talk with the nurse

e. \_\_\_clinic staff being more personally interested in the patient

f. \_\_\_patient instruction regarding hypertension, its treatment, and complications

g. \_\_\_time you wait to be seen in the clinic

h. \_\_\_time to obtain medicine

i. \_\_\_location of the clinic (nearness to your home)

23. Do you know anyone else with hypertension?

yes  no

24. (If #23 yes) Has this influenced you in any way?

yes; how \_\_\_\_\_

no

25. Has anyone influenced you in your decision to (drop out) (continue) coming to the hypertensive clinic?

yes

no

26. (If #25 yes) Who \_\_\_\_\_  
How did they influence you or what advice did they give? \_\_\_\_\_

27. Why do you continue to attend the hypertension clinic?

\_\_\_\_\_ or \_\_\_\_\_

28. Why did you decide to stop coming? \_\_\_\_\_

29. Here are some reasons others have given for dropping out. Have any of these influenced you?

a.  felt well

b.  dissatisfied with the clinic

c.  felt worse when taking my medication

d.  lack of family support

e.  M.D. (or other health professional) advised it

f.  finances

g.  didn't understand instructions

h.  any other reasons \_\_\_\_\_

30. The Clinic is interested in reducing the number of broken appointments. Which of these do you think would be most helpful (check one or more):
- a. \_\_\_ opening on Saturdays
  - b. \_\_\_ opening in the evening
  - c. \_\_\_ arrangements made to dispense medicine from the clinic when being seen rather than through the pharmacy
  - d. \_\_\_ reminder by postcard, telephone, or both about clinic appointment
  - e. \_\_\_ change the people working in the clinic
  - f. \_\_\_ nothing would be helpful
  - g. \_\_\_ any others

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