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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

A NEW DESIGN FOR THE UNIVERSITY OF OKLAHOMA HOSPITALS HEALTH SERVICE: A COMPREHENSIVE COMMUNITY HEALTH CENTER

A DISSERTATION

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SANDRA A. DAUGHERTY, M.D.

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A NEW DESIGN FOR THE UNIVERSITY OF OKLAHOMA HOSPITALS HEALTH SERVICE: A COMPREHENSIVE COMMUNITY HEALTH CENTER

APPROVED BY

DISSERTATION COMMITTEE

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DEDICATION

This paper is respectfully dedicated to the Staff of the University of Oklahoma Hospitals Health Service, and especially to the writer's two co-workers, Mrs. Erma Jean Johnson and Mrs. Marie Dennison, without whose efforts and experience its research could not have been completed.

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A NEW DESIGN FOR THE UNIVERSITY OF OKLAHOMA HOSPITALS HEALTH SERVICE: A COMPREHENSIVE COMMUNITY HEALTH CENTER

CHAPTER I

INTRODUCTION

The institutional provision of medical care for students during their collegiate career is well established in the United States. The degree of care for students ranges from totally comprehensive care to simple symptomatic relief dispensed from a campus nursing station. The provision of industrial medical care to employees is also well established in this country. However, total comprehensive health care for employees and students--although provided to employees by many industrial organizations and especially in those where labor unions have a heavy influence and to some students by active college health services--is a relative newcomer on the medical care scene.

The University of Oklahoma Hospitals Health Service has had the unique opportunity of providing both student medical care and industrial medical care to its students and employees. The services now provided each group are not the same. In addition to the initial physical examinations, immunizations and chest X-rays, complete medical outpatient care is offered the student group which comprises a population of 836 medical, nursing, graduate and paramedical students and house-staff

officers. Limited hospitalization benefits are also given the medical and nursing students and house staff officers. Employee care, on the other hand, is limited to industrial medical care services.

Industrial medical care for employees of the University Hospitals follows the recommendations of the Council on Occupational Health of the American Medical Association[2]. The objectives of the occupational health program are: (1) to protect employees against health hazards in their work environment; (2) to facilitate the placement and insure the suitability of individuals according to their physical capacities, mental abilities, and emotional make-up in work which they can perform with an acceptable degree of efficiency and without endangering their own health and safety or that of their fellow employees; (3) to assure adequate medical care and rehabilitation of the occupationally ill and injured; and (4) to encourage health maintainance. In order to carry out these objectives, the Health Service provides the following services: (1) pre-placement health examinations, including personal and family medical history, occupational history, and physical examination; (2) initial laboratory procedures; (3) radiological examination of the chest initially and repeated yearly; (4) complete immunization and tuberculin skin testing programs; (5) diagnosis and treatment of all occupational injury and disease; (6) health education and counseling; (7) treatment of non-occupational illness and injury only in the following cases: (a) in an emergency, when the employee is given the attention required to prevent loss of life or limb or to relieve suffering until placed under the care of his personal physician, and (b) for minor disorders for which the employee would not reasonably be expected to seek the attention of

his personal physician or to enable the employee to complete his current work shift before consulting his personal physician.

The purpose of this dissertation is to attempt to determine the desire on the part of the hospital employees and students for a program of comprehensive medical care, and to determine the personnel and costs necessary to implement that care. The medical care would be provided by a community health center, designed to fulfill the medical needs of the medical center community itself. Its financial basis would be supported by (1) hospital funded provision of preventive and industrial care to employees and students, (2) hospital funded physician services necessary to give out-patient medical services to enrolled employees, students and student families, and (3) employee and student participation in a prepaid insurance program.

Two types of insurance programs would be available for the employee group: one in which the employees would receive all their care from a designated group of physicians with clinical offices in the Hospital Community Health Center; and a second in which they would receive care from any physicians of their choice outside the hospital community. The second plan would necessarily be of greater expense to the employee than the first.

The student program would be a compulsory one requiring all students to contribute a particular health fee in order to aid the University in financing their health care. This fee would be used by the University to purchase health insurance and to hire personnel required to provide the necessary care. Students would be given the opportunity of purchasing health care plans for their wives and children on a prepaid basis. These students and their enrolled family members

would receive their care from the designated group of physicians with clinical offices in the Hospital Community Health Center.

A Brief History of Employee Health Care Plans

Although the concept of occupational health benefits for employees is a widely accepted one throughout industry today, there has developed over the past 30 to 40 years a broader concept of comprehensive health care for industrial employees.

Most of this development has taken place during the twentieth century, but probably the first major employee-sponsored mutual benefit association was originated in 1882 by the Northern Pacific Railway employees. From it developed a program of complete medical care and other benefits financed by employer-employee payments. This form of employee medical care did not grow rapidly; a few employees were offered non-occupational illness benefits during the years between the first and second World Wars. However, two important occurrences during the 1920's were: (1) the signing of the first health and welfare clause and (2) the beginning of the first nonprofit prepayment group hospital plans. This second event was marked by a contract made between schoolteachers in Dallas, Texas and Baylor University Hospital. Later, in 1933, the American Hospital Association endorsed the principle of group prepayment for hospital bills and in 1934, the American College of Surgeons approved prepayment plans for medical and hospital service. The first State Medical Society sponsored prepayment medical care plans were initiated by Michigan and California in 1939.

The World War II years marked the rapid expansion of health services to employees, these health services being used as barter at the

bargaining table. The Federal Employees Health Service Act was enacted by Congress in 1946. This act provided Federal employees with health services which furnished treatment of on-the-job illness only, pre-employment examinations, and preventive health programs. In 1959 Congress passed the Federal Employees' Health Benefits Act, which provided for payroll deductions and agency contributions for health insurance for Federal employees. As of 1962, thirteen states and Puerto Rico were also providing health insurance programs for all state employees[4].

The Rising Pressure for Increased Health Care

There is a steadily rising pressure for more health care being brought to bear on the medical profession by the American public. This pressure for more health care has been brought about largely by three factors: (1) growing public awareness of health care needs, (2) the continuing rise in chronic disease, and (3) the rise in health insurance as a method of financing medical care. The following is a more detailed discussion of these three factors.

The Growing Public Awareness of Health Care Needs

The growing public awareness of health care needs is reflected by the fact that in 1964, 6.2% of the nation's expenditures for all personal needs was for medical care; this compares with a figure of 3.3% in 1947-1949[7]. This growing public awareness has been brought about for one reason because the public has more money to spend on medical care and for the first time in medical history, good medical care is available to the majority (at least 75%) of the American people and not just to the

wealthy. A second reason is that our country's general educational level is higher and the availability of publications about health and health hazards, as well as the public's ability to comprehend them has increased. A third reason for increased public awareness of medical care needs is that urbanization has placed more people within closer and easier reach of medical care facilities[11].

Even the poor, that lower 25% of our economic society, are realizing that better care is a not-too-distant possibility. Their mere presence in a comparatively wealthy society should be a demand for more and better care. Dr. John Knowles, general director of Massachusetts General Hospital, defines the poor and impoverished of the United States as those with family incomes of less than $4,000, and numbers them at 40,000,000[8]. A member of this class of our society "...will continue to get along but will present the evasive, resentful, but desperately demanding face to the medical world that all people present when confronted by forces they cannot control, which they know are sometimes indifferent to them, but which they cannot do without"[6].

The demand for medical care is increasing but the supply of medical care personnel and facilities is not increasing at a similar rate, and thus prices have risen. "Added demand on a fully utilized industrial plant--and there can be little doubt but what the health industry in this country is highly utilized--without a commensurate increase in supply will inevitably lead to inflated prices, that is rationing by price"[12]. These inflated prices must be borne by one or all of three possible sources: (a) the consumer himself, (b) industry, (c) the government. If the American public decides to reject government spending for health care, then its cost must be borne by the consumer and/or

industry.

Dr. Knowles puts the problem to us squarely when he asks, "As the pace of science accelerates in all walks of life, who will be the medical statesmen and medical politicians who can solve some of the resultant problems so that the benefits are more readily available to society? Will medicine do this, or will the voter, with his 'desperately demanding face' determine the future of doctors and hospitals by turning to central authority with all its bureaucracy and political expediency?"[8].

The Continuing Rise in Chronic Disease

The pressure for more health care is due to a second factor, that is, an actual increased need for medical services due to the continuing rise in chronic disease in this country. The rate of acute disability has been decreasing rapidly and the obvious rise in chronic disease disability due to increasing numbers in the aged population has taken its place. This means, then, that the average person has more chronic illness to look forward to during his lifetime and that he will have more reason to seek medical care on a rather regular basis. Thus, the need for medical care rises and will continue to rise at a rapid rate. As many as possible of these chronically ill must be retained among the working class of people and their disabilities kept at a minimum. This is the picture to come--a certain percentage of our working class will need constant medical supervision of their illnesses during their lifetime work-careers. If the medical profession does not supply this needed care, then the promise of even further increases in costs of medical care to the entire public will rise through payments for custodial care

of the chronically disabled, kept alive but non-contributory by a profession which is refined in medical technology but insensitive to the rationale behind medical care economics, and which is unwilling to take the time now for preventive measures.

The Rise in Health Insurance as a Method of Financing Medical Care

The third factor behind the rising pressure for medical care is the increase in medical insurance. According to Somers and Somers, this pressure for medical care is due to the increased access to it made possible by insurance benefits[17]. These increased benefits have introduced to the American people the idea that medical care is accessible to all persons; indeed, they have become highly critical of the care they are receiving and highly sophisticated about their choice of methods in getting that care.

> Here, then is the perennial paradox of progress. All creative achievement is disruptive. Every partial solution promptly explodes open a new set of problems....So long as medical care was only a possibly helpful luxury--as it was throughout most of history until the twentieth century--its organization and financing remained largely a private affair between individual doctors and individual patients. With the establishment of medical care as a lifesaver or life extender and widely designated as a 'civil right', there inevitably comes a demand for public scrutiny. And, if adequate access and quality are not professionally assured, the demand for public regulation, and public operation follows[17].

The Physician's Responsibility in Helping to Relieve the Pressure

The pressure developed by the American public for more medical care demands that the American physician must now concern himself with the business end of medical care. The peculiar absence of the physician in the world of health economics has brought about a questioning on the

part of the public. It is inquiring as to why physicians have not taken an active part in building a sound economic structure for the medical care industry. The physician's reticence in becoming involved in discussing money matters with the public has been analyzed by Szasz, perhaps somewhat harshly, when he comments on Freud's insistence upon open discussion of the financial aspect of the patient-physician relationship.

> Until then--and even today in many quarters--physicians had not been in the habit of speaking of money matters with patients. This behavior undoubtedly served several purposes, among them the wish to avoid interfering with the image of the sick-helper relationship sketched above. To preserve the belief that the sick receive medical help because they need it, it is necessary to deny or obscure the fact that they pay for it. The possibility that attitudes of 'kindness' and 'sweetness' toward 'poor patients' serve, by and large, the purpose of enhancing the doctor's self-esteem should always be kept in mind.
>
> ...similarly, much of what passes for 'medical ethics' is a set of rules the net effect of which is the persistent infantilization and subjugation of the patient. A shift toward positions of greater dignity and self-responsibility for the disenfranchised, whether 'slave', 'sinner', or 'patient'--can be secured only by honestly and seriously subscribing to a democratic (egalitarian) ethic[18].

Apparently, the subject of medical economics is of more immediate concern to the medical profession outside the teaching hospitals, as their livelihood is dependent upon a healthy system. But should not the subject of medical economics with all its sociological and political implications, be of more interest and be better understood and taught by the staff of the teaching hospitals, just as the processes of normality and disease are best understood and taught by the teaching staff?

The Present State of Medical Care Financing

Labor and Industry's Stake in Medical Care Financing

What is the present state of medical care financing in this country? Roughly three-fourths of the total cost of health insurance is paid

for by employers. It seems that industry's stake in the medical care industry is already considerable. The labor unions are the largest group of organized consumers of medical care in this country and thus labor's potential impact upon the medical profession is great. The growth of voluntary health insurance was precipitated by the economic depression of the 1930's. Just before the 30's, there were between two and three million persons covered by some form of health insurance and prior to World War II, this had increased to twelve million. The war brought about restraints on wage increases with resulting demands by labor for increased fringe benefits to help compensate for this "freezing" of wages. Health insurance happened to be one of those fringe benefits. As a result, by the end of the war, some thirty-seven million people had some form of health insurance. Most recent surveys show that by the end of 1964, this figure had risen to 151 million, or 79% of the population of this country had some form of health insurance; 141 million had surgical expense plans; 109 million had regular medical insurance plans, and 47 million had major medical plans[7].

With this growth of the health insured population there has been broadening of health benefits and a subsequent rise in premium costs. It is because of this rise in the cost of medical care that the labor unions are now in active pursuit of ways to cut these costs, as through utilization of comprehensive health care plans, either open or closed-panel, whichever happens to be functioning effectively in their communities; or by developing their own plans through organized medical group practice.

According to Falk, "They (labor) value their health very highly, as is commonly the case among people whose economic security depends

on individual earning capacity"[5]. In summary, labor's views on obtaining health care are the following:

> (1) Comprehensive modern care should be available to everybody. (2) It should be available through well organized health services, preferably from an integrated and efficient medical care team functioning through group practice. (3) The medical care personnel or the organized medical team should be available to serve people wherever they should receive care--in the office, clinic, hospital, nursing home or patients' homes. (4) All who provide service should be expected to observe high standards of quality. (5) The financing should be through group payment that is as comprehensive as practical so that the costs are neither a barrier when care is needed nor a financial burden after it has been received[5].

Even though 79% of our population has some health insurance, still only one-fourth to one-third of all private expenditures for health services is covered by health insurance. This 25% to 30% pays for about "60% of all private hospital costs, but only 30% of physicians' charges and a negligible share of costs for dental care, medicines, appliances, private duty nursing, nursing homes, etc."[5]. Because of the relatively small amount of physician care presently covered by insurance programs, labor is now demanding more prepaid programs in physician care, and by reason of their own ingenuity at the bargaining table, are well on their way to getting them. They have not waited for the medical profession to organize comprehensive plans to provide their people with programs in physician care. By working closely with industry, they have gotten it on their own.

> Some persist in the belief that the less prepayment the better and that no prepayment would have been best. But to dream of the 'good old days' of no third party payment is futile. We can never go back....The only alternative to prepayment's further expansion and improvement would be some other social method of financing and distributing cost. The burden will never again fall solely on afflicted individuals nor will the public again permit any segment of health care to approach bankruptcy as the hospitals did during the depression of the 1930's. This is the mandate to perfect prepayment[13].

This is the ultimatum that has been issued by labor to the medical profession. Even though it is an ultimatum, it is also a plea by labor to the medical profession to join forces and help it attain its goals of acceptable medical care for its people.

> ....medicine has a much more positive role to play than warding off the threats of legislation or of competing plans. Instead of a fearful and reluctant progression toward a greater involvement in prepayment, intimidated by fear of social forces and handicapped by reliance on secondhand insurance principles and actuarial theories, medicine should assume far greater initiative and leadership in prepayment. Only when it recognizes the advantages of a mature system of prepayment, are we going to have the kind of prepayment that we want and need in America[13].

Government's Stake in Medical Care Financing

Twenty-five percent of the total expenditures for health services was paid by the government during 1964, the remaining 75% being borne by private sources[10]. Thus, we see that health services are provided by the government as well as private sources, as is true of almost every other industry in the United States. This is the unique quality of our economy--there is a balance of governmental and private involvement within it. The 25% government to 75% private expenditure ratio has remained relatively constant since 1950 until the present time[10]. The new legislation (Titles 18 and 19 of the Social Security Act) will, of course, increase the governmental proportion. In addition, there has been a rise of the federal government's share of the total governmental expenditures from 42% in 1950 to 52% in 1964, with a proportionate decrease in state and other nonfederal governmental expenditures[10].

The services for which government expenditures are made are quite different from those which private sources provide.

> The government provides about two-thirds of the funds for medical research, and approximately 42 percent of the money spent on

construction of medical facilities. For personal health care the governmental proportion approaches 20 percent, and it is focused on special groups. Included are veterans, mental and tuberculosis patients, dependents of servicemen, welfare recipients, and 8,000,000 or more governmental employees. Beyond these are a series of important public health programs; some involve the individual directly, such as maternal and child health-care programs, and others are community-wide services such as environmental sanitation[10].

The Relationship of the Teaching Hospital to a Community Health Center

There have been many discussions and published articles on the relationship of the teaching hospital to its community, this relationship being exemplified in the form of community health centers[20,9,14]. The teaching hospitals have become highly developed in techniques of patient care. They have become centers equipped to save lives and to teach students techniques of saving lives as well as teaching techniques of outpatient care. But aside from the effect these hospitals have upon those to whom it gives immediate care, what is their total community effect? Is it as much as it should or could be?

For most of the teaching staff, the outpatient departments of hospitals have served one purpose in the past--to screen patients for inpatient care[9]. Service to the patient was secondary to the patient's contribution to the teaching case repertoire of the hospital. This idea that the community exists solely for the purpose of supplying teaching material for the inpatient training program is becoming obsolete, and the new concept of service to the community through all avenues of the teaching hospital is gaining acceptance. Certainly, a teachers' first responsibility is to teach his students the concepts of normality and disease. However, if he is not teaching these students the effects of the social and environmental influences of society, which are just as

important to the concepts of normality and disease as the body's physical responses, then he cannot be discharging completely his teaching responsibilities to them. The cherished and traditional bedside teaching by the academician of the mechanics of disease in the human body can no longer be divorced from the emotional and social impact of that disease upon that particular patient. If only for the sake of academic completeness, the clinical physician should not teach physical disease processes without also teaching his students the social and economic aspects of disease within the individual and within the community.

No one can argue with the fact that hospitals must be centers of highly developed technical skills where disease processes are treated; but the clinics can provide the meeting ground of patient and physician, where problems of the patient in dealing with his society must be dealt with and solved. In this dissertation, the outpatient clinical complex proposed to serve the medical care needs of the student and employee population of the University of Oklahoma Hospitals is termed a "community health center". It is designed to serve the "hospital community".

Besides the neglected opportunities for teaching in the outpatient clinics, there is another long overlooked but less obvious value in the clinics. Better utilization of outpatient facilities for diagnostic procedures reduces the necessity of hospitalizing for this particular purpose, eventually helping to cut the ever-rising costs of hospitalization. These two reasons for a more concerted effort on the part of the teaching staff in hospital clinics, that is, teaching opportunities and helping to cut the rising costs of hospitalization, are in addition to

the unescapable humanitarian reasons. The clinic visit has been aptly described by Dr. Knowles: "The long hard bench with the four hour wait, multiple referrals, incredible discontinuity of care and various other indignities suffered in an anti-social and decadent environment remains the order of the day in most ambulatory clinics in this country. A two class system of care has prevailed whether it be the contrast between inpatient and outpatient or private versus clinic patient"[9].

The Relationship of Preventive Medicine to Comprehensive Health Care Plans in Community Health Centers

Continuity of medical care is attainable through comprehensive health care plans. Continuity of medical care is the basis of preventive medicine; and the quality of medical care is determined by its degree of continuity. Most of the employees of the University of Oklahoma Hospitals have discontinuous, uncoordinated, catch as catch can type medical care. Much of it is duplicated at different clinics throughout the city, and for each person who has duplicated care, there is another who goes without.

Trying to determine the level of health care among such a population is an almost impossible task. They, themselves, do not know what medical services they have received, as emergency room and clinical personnel are not often concerned with, nor do they have time to offer, any instructions on how to obtain continuous medical care or follow-up for specific illnesses.

The discontinuous care among the employee group is almost equaled by that among a large percentage of the medical student groups. Medical students have an affinity for taking their clinical professors

by surprise in the hallways for a "quickie consultation" on this or that medical problem which they might have. Many persist in this fragmentary method of obtaining medical care throughout their medical careers, often receiving much poorer, discontinuous care than their patients, by virtue of the fact that they "know when to seek medical aid". If the teaching staff of the hospital had an easy confidence in the medical center health service, how much easier it would be on the part of the staff to suggest that the student report to the health service about his problem, and how much better for the student's continuous medical care, provided a competent and understanding staff awaited him in the health service. Continuity of care provides the means for control of chronic disease; how better could continuous medical care be given to a community than through comprehensive medical care plans, specifically designed to meet all the health care needs of a particular community such as the 2,176 employees and 787 students of the University of Oklahoma Medical Center?

The value of the association of a medical school with a comprehensive health care plan is great. Such an association not only elevates the level of care that the patients receive through the high quality staff it employs, but it provides teaching opportunities for the medical house staff and students. Rosen[14] has pointed out that the affiliation of a medical school teaching hospital with a labor-management medical care program would provide students the opportunity of probing into the world of societal and cultural influences upon patients' personalities and physiological responses.

After a three year study of the teaching of preventive medicine in medical schools of the United States, one of the eight recommendations which came out of that study was the following: "Teaching the

clinical application of prevention to medical students might well be in a modern, high-quality, realistic medical care setting, such as may be exemplified in a prepaid medical care system provided by a multiple specialty group practice"[16]. This method of prepaid medical care is a departure from what the American public has been brought up to expect and to respect. "It must not be forgotten that the departure was motivated by a belief that modern medicine requires group practice for the economic delivery of high quality medical care"[15].

Advantages to the Teaching Hospital of the Community Health Center

In addition to the main objective of providing better medical care for its students, students' families, and employees, there are two advantages to the teaching hospital of the community health center.

Increased Teaching Opportunities

The new teaching opportunities afforded by the outpatient clinics have been partially discussed above. This is, of course, one of the important advantages of a community health center. The training of family physicians is uniquely suited to the comprehensive health center. The future practice of medicine will be in the pattern of group practice rather than in the traditional solo practice of the present and past. The comprehensive health center would provide the organizational framework for the training of residents in family medicine. The role of family physicians within the comprehensive health center has been described by Dr. George Baehr.

> So important is the role of the family physician in maintaining the continuity of medical care and as family counselor that we must evolve a means and a method to make the family physician worthy of

> being the quarterback on the medical team. This can be accomplished, I believe, only under an organized system of comprehensive prepaid group practice in which the family physicians on the team have a continuing responsibility for the health and welfare of certain families enrolled under their care. They cannot be bypassed by patients on their way to specialists of the group. On the other hand, they are not influenced by a profit motive to retain patients who should be referred to a specialist and therefore, they restrict their professional competence. Their professional work is also watched by the group's medical director and by the chief internist of the group's medical department. The nature of their referrals to the laboratories and to the specialists of the group, as well as their clinical records, reveals any serious errors in performance. The family doctor's elevated status and his key importance in the medical group soon assures him financial rewards and a professional standing comparable to that of the specialist in family counseling and guidance. Because of their importance as key members of the medical group, many of the family physicians in group practice are board-qualified internists or board elligible[1].

Increased Research Opportunities

In addition to the teaching and training advantages, there are inherent in a comprehensive community health center many research opportunities for the teaching hospital. The basis of a prepaid health plan is a system of adequate records; these records contain demographic information on the population insured. They greatly facilitate the selection of population samples and the follow-up of individuals for long periods of time[15].

There are vast possibilities of research into the morbidity and epidemiology of disease in the comprehensive community health center. Studies in mammography as a method of detecting carcinoma of the breast and in the incidence and prognosis of coronary artery disease are being undertaken by Health Insurance Plan of New York[15]. Kaiser is conducting a study to determine the importance of periodic health examinations in detecting disease early and preventing illness and disability. Both HIP and Kaiser are conducting studies to determine some of "...the correlates

of fetal mortality, prematurity, congenital anomalies, and other morbid conditions which appear among the offspring"[15]. Besides these "population-based projects", there are possibilities for programs in clinical research.

These research programs should be undertaken with the purpose that they would eventually provide better means of patient care and earlier detection of disease in the population being cared for by the center, and, of course, in all patients. The idea that the comprehensive center exists for the purpose of research should never be permitted. The center would exist for the main purpose of providing students, employees and staff with comprehensive medical care, at the lowest possible cost to both patient and employer.

CHAPTER II

PRESENT UTILIZATION OF PREVENTIVE AND INDUSTRIAL SERVICES AND ESTIMATION OF THE PROPOSED HEALTH CENTER POPULATION

Before a program of comprehensive health care can be suggested, the population of prospective patients utilizing such a program must be estimated. Also, the preventive and industrial services provided the employees and students must be estimated in order to help determine the hospital's contribution to the total health care plan.

This chapter reports the findings of three separate surveys. The first survey was to determine the utilization of hospital furnished preventive and industrial services to the hospital community of students and employees. The second survey was to determine the extent of employee medical insurance and also to determine the employees' desire for a comprehensive health care plan. The third survey was to determine the student groups' extent of medical insurance coverage and their desire for a comprehensive medical care plan for their families.

Survey of the Preventive and Industrial Services

In order to determine the extent to which employees and students take advantage of the preventive and industrial services offered now and in the past by the University of Oklahoma Hospitals Health Service, a survey was carried out of the visits made over a six month period of time by 613 consecutive health service patients. These 613 consecutive

patients visited the Health Service initially during the month of January, 1964, and subsequently, during the following five months. This period of time was chosen by the writer because it covered the last six months of her three year association with the Health Service. It was felt that the survey would be facilitated by the writer's having been a member of the Health Service staff during that time and thus policies, handwriting, charting procedures, etc., would be more easily interpreted.

The patients were chosen consecutively rather than randomly because it was believed that the drawing of a random sample would not yield a typical health service population, nor would it give an accurate measure of the Health Service work load, as measured by the number of patients seen each day. This is due to the fact that certain employees and students frequent the Health Service more regularly than do others. For example, all of the student groups (including medical, nursing, paramedical and graduate students, and house-staff officers) visit the Health Service at least one time per year, for the particular preventive service of receiving a chest X-ray. The first and second year medical students and nursing students, however, make much more frequent use of the Health Service than do the third and fourth year medical students.

Of the hospital employee group, the lower paid individuals employed by the Service and Dietary Departments make more frequent visits than do the higher paid employees. This is because these lower paid employees generally have no private physician or nurse with whom to consult about medical problems, and they tend to use the Health Service for this purpose.

None of the Health Service patient groups visit it in a random fashion. During a typical day, new employees sign in the daily registry

between 8 and 9 A.M. and again, between 1 and 2 P.M. Dermatology and Medicine Clinic patients will also sign in early in the morning, while Orthopedic or ENT Clinic patients will sign in during the noon hour. Most sick patients will be seen in the morning, so that they may obtain relief early in the work day or be taken off duty to go home. Medical students are seen most frequently between 11 A.M. and 1 P.M., as this is the most likely time they will have free. Nursing students, on the other hand, will visit the Health Service in the late afternoon. These are, of course, generalizations; they are given only for the purpose of indicating that Health Service patients do not make their visits in a random fashion. Therefore, the sample of patients were chosen as those who visited the Health Service in a consecutive manner each day during the month of January. Any visits that these patients made during the period of January 2, 1964, through June 30, 1964, were classified according to the service they received and according to whether they were student or employee. These visits were determined by reviewing each patient's chart for the six month period.

Classification and Enumeration of Preventive and Industrial Health Services

The 613 patients included employees, medical students, nursing students, and a group classified as other students which was composed of X-ray technician students, laboratory technician students, cyto-technician students, physical therapy students, dietetic interns, graduate students and house staff officers. These 613 patients made a total of 2,088 visits to the Health Service over the six month period for an average of 3.24 visits per patient.

Through this survey, it was determined that 14.8% of the charted visits were recorded by the receptionist, nurse, or physician without the patient's having signed the daily patient registry, which each patient is asked to sign before he is seen. It was also determined that for approximately 8% of those that did sign the daily registry, no visit was recorded in their charts.

The total of 2,088 visits was a corrected total obtained by subtracting the visits that were unrecorded in the charts (181 total) from the total number of visits made (2,270). The corrected total number of visits made by all Health Service patients during the six month period was 6,509, averaging 1,085 visits per month or approximately 51 patients per day. The 2,088 visits made by the 613 sample patients accounted for 32.1% of the total 6,509 visits for the six month period. Student visits accounted for approximately 20% of the 2,088 visits. The average number of visits for the six months for each student group which visited the Health Service was as follows: 2.48 visits for medical students; 3.84 visits for nursing students and 4.0 visits for other students. The average number of visits for employees was 3.5 visits.

TABLE 1

NUMBER OF VISITS AND THE NUMBER OF PATIENTS IN VARIOUS CLASSIFICATIONS AND THE AVERAGE NUMBER OF VISITS PER SIX MONTH PERIOD

Classification of Patient	Visits	Patients	Average Visits Per 6 Months
Medical Student	159	64	2.5
Nursing Student	96	25	3.8
Other Student	160	40	4.0
Employee	1,673	484	3.5

Each visit that the employee or student made was classified according to the service he received; these classifications were as follows: (1) a physician visit was one in which the patient was examined or treated by the Health Service physician, (2) a nurse visit was one in which the patient was examined or treated by the Health Service nurse, (3) a clinic visit was one in which the patient was seen in a specialty clinic, (4) an immunization visit was one in which the patient received an immunization; if at the same time he received another service such as an X-ray or a skin test, no other service was classified, (5) a skin test visit was one in which the patient received a skin test or a skin test reading, (6) a chest X-ray visit was one in which the patient received an X-ray, (7) a laboratory procedure visit was one in which the nurse obtained a laboratory specimen from the patient and no other procedure was done, (8) a chart visit was one in which the receptionist obtained the chart, gave it to the patient and directed him to his scheduled clinic. The classification of the survey sample population of student and employee visits is as recorded in Table 2.

As can be seen from Table 2, the number of specialty clinic visits made by the students is quite low when compared with the number of physician and nurse visits they made. There are two possible explanations for this. Either the treatment they received from the Health Service nurse or physician was complete and they required no specialty referral, or they obtained specialty referrals on their own, i.e. hallway "consultations" and self-referrals to private as well as staff physicians. On the other hand, employee referrals to specialty clinics is high. Industrial care of patients requires the use of specialty clinics for treatment of accidental injuries and for more complete evaluations of

TABLE 2

CLASSIFICATION OF THE SAMPLE SURVEY OF STUDENT AND EMPLOYEE VISITS

	Employee Visits	Student Visits
Physician Visit	198	128
Nurse Visit	202	117
Dermatology Clinic	76	33
Oral Surgery Clinic	74	10
Medicine Clinic	73	3
ENT Clinic	33	18
Surgery Clinic	29	1
Ophthalmology Clinic	26	7
OB-Gyn Clinic	25	4
Orthopedic Clinic	18	2
Urology Clinic	3	2

	Employee and Student Visit
Immunization Visit	121
Skin Test Visit	367
Chest X-ray Visit	365
Laboratory Procedure Visit	122
Chart Visit	421

pre-employment disabilities. These two reasons, treatment of job injuries and pre-employment evaluations, account for the high number of specialty clinic referrals in the employee group.

In addition to the services listed in Table 2, the Health Service provides initial physical examination of all new hospital employees and students. The number of physicals performed from year to year remains approximately the same[3]. The exact number of physicals for the year 1964 is unknown. However, the number during the year July 1, 1965 through June 30, 1966 (the last two weeks being estimated) was 1,055, an average of 88 per month or 4.2 per work day. Of the 1,055 total, 865 were performed on employees and 190 were on students.

In order to determine what the preventive and industrial care load of the hospital employees and students was on the health service each week, an expected number of visits within each classification was determined, using the 32.1% sample as the base figure. The expected number of visits can be seen for each classification in Table 3.

From Table 3, which contains all the preventive and industrial services for employees and students for a six month, a one month, and a one week period of time, the number and type of personnel necessary to carry out these services can be estimated. The table does not include clinical services for students, as these were not considered preventive services.

Personnel Required for Preventive and Industrial Services

The duties of the Health Service clerk-receptionist are to interview the patient initially and to determine the reason for the visit, obtain the patient's chart, and direct it to the nurse for those visits

TABLE 3

EXPECTED NUMBER OF EMPLOYEE AND STUDENT VISITS
FOR INDUSTRIAL AND PREVENTIVE CARE

	Expect. No. For 6 Months	Expect. No. For 1 Month	Expect. No. For 1 Week
Physician Visit	617	103	26
Nurse Visit	629	105	26
Dermatology Clinic	237	40	10
Oral Surgery Clinic	231	39	10
Medicine Clinic	227	38	10
ENT Clinic	103	17	4
Surgery Clinic	90	15	4
Ophthalmology Clinic	81	14	4
OB-Gyn. Clinic	78	13	3
Orthopedic Clinic	56	9	2
Urology Clinic	9	1	-
Immunization Visits	377	63	16
Skin Test Visits	1,143	191	48
Chest X-ray Visits	1,137	190	48
Laboratory Procedure	304[a]	51	13
Chart for Clinic	1,050[a]	175	44
Physical Examinations	528	88	22

[a]Estimated number obtained by subtracting the estimated number of student visits (20%) from the total.

which require nurse or physician care. Otherwise, the clerk receptionist makes the patient's appointments, directs him to the clinic he is referred to, or gives him instructions for obtaining chest X-rays. She conducts 221 patient interviews per week; these interviews probably average about 10 minutes each. For the new employees, the interview and instruction period is necessarily longer; for these visits an average of 15 minutes per new employee is required. This totals about 42 hours of clerk-time per week. Another clerk is required to answer telephones, type, file, and relieve the first clerk. Thus, the number of clerks required to provide preventive and industrial services for the employees and students is two.

The amount of nurse time required to provide preventive and industrial services is more difficult to determine, as the nurse's duties are many, and the amount of time required for each varies. Immunizations and skin tests require about 10 minutes each, when charting time and the preparation of materials for each test is taken into account. Obtaining laboratory specimens for the "laboratory visits" takes about 15 minutes per patient. Pre-employment examinations each require at least 30 minutes of nurse time. Twenty minutes is required for each "nurse visit". The nurse must also interview patients for each "doctor visit" to take temperatures, blood pressure, etc.; these interviews require about 15 minutes. This amount of nurse time totals about 40 hours per week. A second nurse is necessary to assist the physician with physical examinations, minor surgical procedures, and in performing other nursing procedures on patients; she must also handle the administrative nursing duties of the Health Service.

The clinical duties of the Health Service physician are to see ill or injured patients and to perform physical examinations. The sickness and injury visits each average about 30 minutes of physician time. Each physical examination, if done properly, takes about 30 to 45 minutes of physician time. This amounts to approximately 25 hours of examination time spent by the physician, or approximately eight three-hour clinics per week. The remainder of his time the physician spends performing administrative duties, reviewing new employee charts, and attending medical conferences.

The number of specialty clinic visits are enough to require approximately two dermatology, two oral surgery and two medicine clinics per week. One clinic per week for ENT, surgery, and ophthalmology is needed. The employee surgery and ophthalmology visits are usually for job injuries and are on a semi-emergency basis. Thus, a regularly scheduled clinic in these areas is not necessary except for follow-up visits. On call arrangements are made for these two specialties.

The number and classification of personnel and clinics required to fulfill the needs of the employees and students for preventive and industrial services are listed in Table 4.

Preventive and Industrial Care Services to be Provided in a Comprehensive Medical Care Program

The preventive and industrial services which the University of Oklahoma Hospitals would provide its students and employees as part of the proposed comprehensive medical care program are the following:

1) Pre-employment health examinations on all employees and students which would include complete histories and physical examinations; hemoglobin, hematocrit and white blood count determinations;

TABLE 4

NUMBER OF PERSONNEL AND CLINICS REQUIRED TO PROVIDE INDUSTRIAL AND PREVENTIVE MEDICAL SERVICES

Classification of Service	Amount of Time Required
Clerical	2 full time clerks
Nurse	2 full time nurses
Physician	1 full time physician
Dermatology	2 3 hr. clinics per week
Oral Surgery	2 3 hr. clinics per week
Medicine	2 3 hr. clinics per week
ENT	1 3 hr. clinic per week
Surgery	1 3 hr. clinic per week
Ophthalmology	1 3 hr. clinic per week

gross and microscopic examinations of the urine; serologic blood tests for syphillis.

Any additional examinations, such as special X-rays or electrocardiograms needed to determine the patient's safe employability would be performed prior to employment at no expense to the patient.

2) All immunizations including small pox, tetanus, diptheria, polio, and any other immunizations required by the employee for international travel.

3) Tuberculin skin testing on all new employees (unless known to be positive reactors) with intermediate PPD and repeated yearly on all negative reactors at the time of yearly chest X-ray and immunization review.

4) Radiological examination of the chest at the time of employment and yearly on all employees.

5) Symptomatic treatment of non-occupational illnesses and injuries, with referral to private physicians for further necessary treatment.

6) Treatment of all occupational illnesses and injuries including hospitalization.

7) Diagnosis and outpatient treatment of all serious acute respiratory, gastro-intestinal, or skin infections in personnel. The term "serious" would include those persons having fever or unusual persistence of symptoms.

8) A chronic disease control program in addition to the previously described tuberculosis program, which would include screening programs in diabetes, glaucoma, and heart disease.

9) Voluntary yearly physical examinations for those patients

over the age of 40 years and every three years for those patients under the age of 40.

The last three services, that is, diagnosis and treatment of serious infections, chronic disease screening programs, and periodic physical examinations, have not been performed by the health service routinely in the past.

The purpose of the periodic physical examinations, in addition to the obvious one of discovering physical defects and disease, is to educate the employees as to what is good medical care. It is also hoped that the interest the health center would show in the employee might increase the employee's sense of worth to the University Hospital.

Population Estimates of Employees Purchasing a Program of Comprehensive Medical Care

Questionnaires concerning medical care were distributed to both the employee and student groups. The employee questionnaire and its response will be discussed first.

The employee questionnaire (Appendix A) asked each employee his age, sex, and marital status; the number and ages of his children; the age of his spouse; the extent of his health insurance coverage, i.e. whether he had hospitalization and/or physician care insurance, and whether the insurance covered the other members of his family. The last two questions of the questionnaire asked whether the employee would purchase medical care insurance to cover his total health needs, these health needs being supplied either by: a closed panel of physicians, consisting of University Hospital staff and qualified physicians from private practice (question 6); or on a fee for service basis by his own private

physician (question 7). The questionnaire indicated that such insurance costs would be less than the current Blue Cross, Blue Shield rates for comparable coverage.

Currently, there are approximately 2,176 employees working at the University of Oklahoma Hospitals[3]. However, of these employees, about 93 are graduate students on stipends and 148 are house staff officers. Since graduate students and house staff officers were circulated a different questionnaire, they were asked not to fill out the employee questionnaire, if they happened to receive one. Their total number, 241, was subtracted from the total of 2,176. Another large group, the department of Psychiatry, was excluded from the total, as no questionnaires were received from that department until after the rest of the questionnaires had been tallied. They numbered 98 (excluding the twelve Psychiatry residents). This brought the total who received questionnaires to 1,737. The questionnaires were given out at the time of the monthly distribution of pay checks. Some employees, most particularly members of the teaching staff, received more than one questionnaire because they received more than one check. As there was no means of determining how many this included, the total number of employees receiving questionnaires was kept at 1,737 for computing employee response. The total number of questionnaires returned was 1,077, for a 62.0% employee response.

The total number of questionnaires sent to the various departments was 2,052, as this was the total number of checks issued by the business office on March 31, 1966, exclusive of house staff officers, graduate students on stipends, and the Department of Psychiatry. These

questionnaires were distributed with each check on May 30, 1966. Obviously those persons receiving more than one check received the same number of questionnaires.

The questionnaire response was divided into five large groups. These were: (1) the clinical departments, (2) the business and administrative offices, (3) the basic science departments, (4) the service departments, and (5) the nursing service. For those divisions included in each grouping, see Appendix B. The percentage responses by groups are listed in Table 5.

TABLE 5

EMPLOYEE QUESTIONNAIRE RESPONSE BY DEPARTMENTS

Group	Total Sent	Total Returned	% Response
Clinical Departments	405	218	53.8
Business and Administrative Offices	174	130	74.7
Basic Science Departments	330	196	59.3
Service Departments	543	303	55.8
Nursing Service	600	230	38.3

From the figures in Table 5, it can be determined that the average percent returned of the number of questionnaires sent was 52.3%. The difference between the number sent (2,052) and the number of employees receiving them (1,737) was 315; this would be the approximate number of persons receiving two checks.

The responses of the five different groups are summarized in Table 6. Of those 1,077 employees responding, 72.3% were found to have some form of hospitalization insurance; 55.0% had some form of physician care insurance; 47.4% had Blue Cross insurance; 42.5% had Blue Shield

insurance; and 24.6% had no health insurance of either kind. Most recent surveys show that 79% of the American population have hospitalization insurance[7]. This compares with 72.3% among the University of Oklahoma Hospitals' personnel.

TABLE 6

PERCENTAGES OF EMPLOYEES HAVING HEALTH INSURANCE COVERAGE AT PRESENT AND TYPE OF COVERAGE, AND PERCENTAGES OF EMPLOYEES DESIRING COMPREHENSIVE HEALTH COVERAGE

	Total	Admin. and Bus. Off.	Clin. Dept.	Basic Sci. Depts.	Serv. Depts.	Nurs. Serv.
A. Insurance:						
Have any hosp. ins.	72.3	78.5	77.1	76.5	62.4	73.9
Have any phys. ins.	55.0	62.3	55.5	62.2	45.5	56.5
Have Blue Cross	47.4	50.8	52.3	52.5	39.9	46.5
Have Blue Shield	42.5	46.2	43.1	45.4	36.3	45.7
Have no hosp. or phys. ins.	24.6	16.2	21.1	20.4	33.7	24.3
B. Answers to 6 and 7 (see Appendix A):						
"Yes" to question 6	39.2	33.8	40.8	38.8	41.6	37.8
"Yes" to question 7 alone	20.1	20.8	15.1	30.0	13.5	22.2
"don't know" to question 6	27.1	35.5	24.8	22.0	28.7	30.4

From Table 6 it can be seen that the administrative and business offices are the best insured group, having the smallest percentage of no health insurance, 16.2%. The group with the lowest percentage of health insured persons is the service department group; therefore, it follows that they also had the highest percentage of uninsured persons.

Table 6 also shows the percentages of employees who indicated they desired comprehensive coverage. In order to determine how many employees would subscribe to comprehensive health coverage under a closed panel of physicians, the 39.2% answering "yes" to question 6 (Appendix A)

was applied to the total population of employees. The total was obtained by adding the 98 Department of Psychiatry employees (excluding the twelve Psychiatry residents) to the 1,737 estimated employees receiving the questionnaire, giving a total of 1,835. Similarly, the 20.1% answering "yes" to question 7 (Appendix A) was applied to this total and the 27.1% answering "don't know" to question 6 (Appendix A) was applied to the total. In this manner, the number of employees who would potentially subscribe to a closed panel plan as described in question 6 was estimated at 719; the number who would subscribe to another plan as described in question 7 in which their own family physician would provide their care on a fee for service basis was estimated at 369; and the number of employees who answered "don't know" to the closed panel plan was 497. These figures are summarized in Table 7.

TABLE 7

ESTIMATED NUMBER OF EMPLOYEES WHO WOULD SUBSCRIBE TO PLAN UNDER QUESTION 6, UNDER QUESTION 7, AND THOSE ESTIMATED AT RESPONDING "DON'T KNOW" TO QUESTION 6

% Employees Answering Questionnaire	Total Number of Employees		Number of Employees Subscribing to Plan
Question 6 "yes" = 39.2%	1,835	=	719
Question 7 "yes" = 20.1%	1,835	=	369
Question 6 "don't know" = 27.1%	1,835	=	497

Table 8 shows the numbers of employee spouses and children, age 19 or less that were estimated for the employee population. From the percentages of employees who indicated they would subscribe to either a closed panel plan or one using their private physicians, the number of

spouses and children who would be insured was estimated. These estimates appear in Table 9.

TABLE 8

NUMBER OF SPOUSES AND CHILDREN OF THOSE ANSWERING "YES" TO QUESTIONS 6 AND 7

Spouses and Children	Admin. and Bus. Off.	Clin. Depts.	Basic Sci. Depts.	Serv. Depts.	Nurs. Serv.	Totals
Spouses of those answering "yes" to 6 or 7	48	75	93	104	71	391
Children age 19 or less of those answering "yes" to 6 or 7	50	113	157	167	146	644

TABLE 9

ESTIMATED NUMBER OF FAMILY MEMBERS SUBSCRIBING TO A COMPREHENSIVE PLAN OF HEALTH INSURANCE

Family Member	% Answering	Total Pop.		Number of Family Members Subscribing to Plan
Spouses of employees answering "yes" to 6 or 7	59.3	1,135	=	673
Children (age 19 or less) of employees answering "yes" to 6 or 7	59.3	1,870	=	1,109

The employees subscribing to the closed panel plan would receive their care from the proposed University of Oklahoma Hospitals Community Health Center, and would be hospitalized in this hospital only. The family members of all employees as well as those employees desiring care from their present physicians would receive their care elsewhere from

the private physician of their choice.

It might be expected that 39.2 percent (percentage of those responding "yes" to 6) of those employees responding "don't know" to question 6 would subscribe to the closed panel plan. This would bring to a total of 918 the number of employees that would be given comprehensive medical care by the proposed University of Oklahoma Hospitals Community Health Center.

Population Estimates of Students and Their Families Purchasing a Program of Comprehensive Health Care

The student questionnaire was distributed to 787 medical, nursing and graduate students and house-staff officers. Their overall response was 60.5%. The responses of the various classifications of students can be seen in Table 10.

TABLE 10

NUMBER OF QUESTIONNAIRES SENT AND NUMBER RETURNED BY THE VARIOUS STUDENT GROUPS

Student Group	Sent	Returned	Percent Return
1st year medical students	100	100	100
2nd year medical students	96	69	71.9
3rd year medical students	92	46	50
4th year medical students	95	49	51.6
Graduate students	187	91	49
House staff officers	148	85	57.4
Student nurses	69	36	52.2
Totals	787	476	60.5

The student questionnaire (Appendix B) asked of the student his classification, marital status, number and age of his children and for an opinion as to whether he felt the University of Oklahoma should provide

him complete or partial medical care or whether he felt it had no responsibility for his medical care. He was also asked if he would be willing to pay a $20.00 health fee each semester if the University were to take complete responsibility for all his medical care needs, and whether he thought the $20.00 fee was too high or too low. Married students were asked if they would purchase a program of complete health care for their spouses and/or children by means of an insurance program. Married students were also asked to state the approximate amount they spent on medical care insurance per year. The results of the student questionnaire are summarized in Tables 11 through 14.

The proportion of married students is, as would be expected because of their higher mean age, highest in the house staff group, while the lowest proportion of married students was in the student nurses, the youngest age group (Table 11). On assessing the students' attitudes about University provision of medical care, 70% or more of all the groups except the graduate student and house staff groups, felt that the University should provide them with complete medical care. The percentages for house staff and graduate students were 58.8% and 42.9% respectively. As would be expected from the preceding, these groups yielded the highest percentage of those students who believed the University had no responsibility for their medical care, 14.3% for graduate students and 17.6% for house staff (Table 11).

As can be seen from Table 11, more than 50% of all groups except the graduate students and house staff felt that the $20.00 fee per semester was too high. However, those who would not pay the fee were less than 45% in all student groups except the second year medical students, of which 67.4% would not pay it. The attitude of the students

TABLE 11

RESULTS IN PERCENTAGE OF THE STUDENT QUESTIONNAIRE CONCERNING MARITAL STATUS, ATTITUDE TOWARDS CARE BY THE HOSPITAL AND TOWARDS PAYMENT OF A HEALTH FEE

	1st Yr. M.S.	2nd Yr. M.S.	3rd Yr. M.S.	4th Yr. M.S.	Grad. Stud.	House Staff	Nursing Stud.
Marital Status							
Married	41	47.8	65.2	69.4	60.0	90.6	25
Single	58	49.3	34.8	26.5	35.0	9.4	75
Divorced	1	2.9	0.0	4.1	4.4	0.0	0.0
Attitude towards care							
Complete	82	88.4	73.9	73.5	42.9	58.8	80.6
Partial	14	8.7	19.6	24.5	41.8	20.0	19.4
None	4	1.4	2.2	2.0	14.3	17.6	0.0
Attitude towards fee							
Too high	54	58	76.1	73.5	30.7	38.8	75
Too low	5	5.8	4.3	2.0	6.6	11.8	25
All right	33	31.9	8.7	16.3	47.3	25.8	-
Would pay $20.00							
Yes	66	62.3	24	40.8	64.8	48.2	36.1
No	23	31.9	67.4	42.9	22.0	44.7	22.2
Don't know	8	3.0	8.7	16.3	12.1	8.2	41.7

toward the health fee could be summarized by saying the majority thought the fee to be too high but they would tend to pay it anyway.

The average number of children per married student was highest at 2.1 in the house staff group. Again, this is as would be expected due to the higher mean age. There were many larger families in the house staff group. One house staff officer had 9 children, one had 6 and five had 4 children. Table 12 shows the number of married students responding to the questionnaire, their number of children and the amounts they spent for medical care insurance.

TABLE 12

NUMBER OF MARRIED STUDENTS RESPONDING TO QUESTIONNAIRE, THEIR NUMBER OF CHILDREN, AND THE AMOUNTS THEY SPENT FOR MEDICAL CARE INSURANCE

	1st Yr. M.S.	2nd Yr. M.S.	3rd Yr. M.S.	4th Yr. M.S.	Grad. Stud.	House Staff	Nursing Stud.
Married students	41	33	30	34	55	77	9
Students having children	30	11	15	24	33	63	3
Total number of children	21	16	24	37	69	162	6
Average number of children per married student	0.5	0.5	0.8	1.09	1.3	2.1	-
Average amount spent for ins. by married students	$57.99	$72.14	$51.42	$103.09	$156.04	$119.40	-
% married students no health ins.	36.6%	24.2%	33.3%	29.4%	14.6%	12.2%	-

Graduate students and house staff had the lowest percentages of no health care insurance coverage. They also paid the greatest amount

for health care insurance averaging $156.04 for graduate students and $119.40 for house staff.

The number and percentage of those students who would, might, (depending upon cost), and would not purchase health care for their families, is listed in Table 13. The percentages who stated they would purchase health care for their families were highest in the three older age groups, that is, 4th year medical students, graduate students and house staff.

TABLE 13

NUMBER AND % OF STUDENTS WHO WOULD, MIGHT AND WOULD NOT PURCHASE FAMILY CARE; NUMBER OF CHILDREN OF THOSE WHO WOULD OR MIGHT PURCHASE FAMILY CARE

	1st Yr. M.S.	2nd Yr. M.S.	3rd Yr. M.S.	4th Yr. M.S.	Grad. Stud.	House Staff
Number who would purchase family care	8	13	7	15	23	33
% who would purchase family care	19.5%	39.4%	23.3%	44%	41.8%	42.9%
Number of children of those who would purchase family care	5	6	10	18	33	79
Number who might purchase family care	26	13	13	13	22	21
% who might purchase family care	63.4%	39.4%	43.3%	38.2%	40%	27.3%
Number of children of those who might purchase family care	10	9	7	10	23	41
Number who would not participate	6	5	10	7	9	23
% who would not participate	14.6%	15.2%	33.3%	20.6%	16.4%	29.9%

By combining the percentages of students who said they would or might (depending upon cost) purchase care for their families, and applying these percentages to the predicted total numbers of spouses and children in each student group, a predicted number of spouses and children who would or might utilize the health care facilities of a Hospital Community Health Center can be obtained. The predicted spouses and children are listed in Table 14.

TABLE 14

PREDICTED NUMBER OF SPOUSES AND CHILDREN OF THOSE WHO WOULD OR MIGHT PURCHASE CARE

	1st Yr. M.S.	2nd Yr. M.S.	3rd Yr. M.S.	4th Yr. M.S.	Grad. Stud.	House Staff
% who would or might purchase care for their families	83%	78.8%	66.6%	82.2%	80.0%	69.7%
Predicted total no. of spouses	41	46	60	66	121	136
Predicted no. of spouses who would or might receive care	34	36	40	54	97	95
Predicted total number of children	21	21	34	35	157	201
Predicted number of children who would or might receive care	15	17	23	29	126	141

It would appear reasonable to assume that those students who responded that they might purchase family care, depending upon the cost of the care, would do so if the plan were a good one.

No mention has been made of any predicted numbers of students who would purchase care for themselves. The writer feels that the

purchase of health care through the Health Center should be compulsory for all student groups. There are several reasons for this. It would cut down on the number of unscheduled "hallway" consultations and tend to encourage students to use the Health Service for total care. Also by knowing the number of students expected, the amount of money available to the Hospital for budgeting Health Care could be estimated, if compulsory payment of health fees and health insurance were required. Any person receiving a stipend from the hospital, such as graduate students and house staff officers could be given this care at the discretion and expense of their departments, as a fringe benefit to their employment.

The numbers of students, their spouses and children and the number of employees estimated to receive health care from the proposed Hospital Community Health Center are summarized in Table 15.

TABLE 15

NUMBER AND CLASSIFICATION OF INDIVIDUALS ESTIMATED TO RECEIVE CARE FROM THE PROPOSED HOSPITAL COMMUNITY HEALTH CENTER

Classification	Number to Receive Care	
Employees	918	
Students	787	2,061 adults
Students' Spouses	356	
Students' Children	351	

CHAPTER III

THE COMPREHENSIVE HEALTH CARE PLAN

Before a program of comprehensive health care can be outlined, some means of estimating the number of visits a population would make to the health center must be derived. From this number of visits, the total number of physicians and other personnel necessary to provide that care can be determined.

Data from the National Health Survey shows that an American adult makes 5.3 visits to physicians per year[11]. Other data from the survey provides information on the number of visits made to selected specialties. Using these averages from the National Health Survey, the number of physician visits made by the enrolled population of employees, students and student families utilizing the proposed University Hospital Community Health Center, can be estimated. It is realized that the National Health Survey estimates are derived from the general broad population and therefore, are not accurate when applied to specific groups. Because of their work environment, the Medical Center's employees and students probably utilize physician services more frequently than do members of the general population, and therefore, it is to be expected that the estimates of physician visits presented in this chapter are low. The National Health Survey averages of total and specialty physician visits are used because they are the most recent and most complete ones available.

Of the 5.3 yearly average visits to physicians, about one visit is estimated for preventive care services[11]. These services have been estimated for the employee and student populations in Chapter II. Subtracting the one preventive visit from the 5.3 national average visits, leaves 4.3 physician visits per student and employee populations. Applying these 4.3 visits per person to the total student (787) and employee (918) populations, a total of 7,332 physician visits is obtained. Applying the 5.3 average to the student spouse population yields 1,887 physician visits. It is predicted then that these two adult groups will see a physician a total number of 9,219 times in one year.

Percentage of the national population who seek specialty services and their average number of yearly visits to each specialist are summarized in Table 16[11].

TABLE 16

PERCENTAGE OF THE POPULATION WHO SEEK SPECIALTY SERVICES AND THEIR AVERAGE NUMBER OF YEARLY VISITS TO EACH SPECIALIST

Specialty	Percent of Population	Number of Visits Per Yr. Per Patient
Pediatrician	20% of children less than 15 years	3.1
Ophthalmologist	6.3% of total population	1.8
Ob-Gyn	12.1% of female population over age 14	3.9
ENT	2.5% of total population	2.5
Orthopedist	1.7% of total population	3.2
Dermatologist	1.6% of total population	3.2
Psychiatry (student)	4.4% of student population	5.0
Psychiatry (general)	0.6% of total population (excluding students)	4.5

Applying these percentages and average numbers of yearly visits to the population of employees, students, student spouses and children, estimated numbers of visits to specialists can be determined for the proposed Health Center population. These figures are given in Table 17. No percentages or average number of visits are available for the specialty of surgery. Therefore, the general medical and surgical visits have been combined.

TABLE 17

ESTIMATED NUMBERS OF PERSONS RECEIVING CARE OF SPECIALISTS AND THE ESTIMATED NUMBER OF VISITS MADE TO EACH SPECIALTY PER YEAR IN THE PROPOSED COMPREHENSIVE HEALTH CENTER

Specialty	Percent of Population	No. of Visits For Each Patient	Total Number of Visits Per Specialty per Year	
Pediatrician	20% of 351	3.1	218	
Ophthalmologist	6.3% of 2,412	1.8	274	)
Ob-Gyn	12.1% of 431	3.9	203	)
ENT	2.5% of 2,412	2.5	153	)
Orthopedist	1.7% of 2,412	3.2	141	) 1,111
Dermatologist	1.6% of 2,412	3.2	125	)
Psychiatry (Student)	4.4% of 787	5.0	171	)
Psychiatry (General)	0.6% of 1,625	4.5	44	)

As can be seen from both Tables 16 and 17, the student psychiatry visits are calculated on a different basis than those within the general population. It has been estimated by Wilms[21] that 4.4 percent of an undergraduate student body will need psychiatric consultation during a year's time and that each student seen will make an average of five total visits per year. Although an undergraduate student body is not exactly comparable to the Medical Center student body, these figures will give a better estimate of needed student psychiatric visits than the obviously

low percentage of 0.6% of the general population estimated from the National Health Survey. Even using the 4.4 percent average, it is still low when considering a medical student population, where psychiatric facilities are readily available to the student. The percentage expected among the medical students is perhaps three to four times that expected in an undergraduate student population. By subtracting the number of specialty visits for adults (1,111) from the number of total physician visits (9,219) for the adult population, the approximate number of general physician visits made by the Health Center population can be obtained. This is 8,108.

Excluding student preventive and employee industrial and preventive visits, the numbers of general and specialty three hour physician units needed by the employee, student and student family members are summarized in Table 18.

TABLE 18

NUMBER OF GENERAL AND SPECIALTY CLINICS REQUIRED BY THE EMPLOYEES, STUDENTS AND STUDENT FAMILY MEMBERS EACH YEAR (EXCLUSIVE OF PREVENTIVE AND INDUSTRIAL SERVICES TO STUDENTS AND EMPLOYEES)

Specialty Clinic	Number of Visits Per 3 Hour Clinic	Number of 3 Hour Physician Units Needed Per Year	Number of 3 Hour Physician Units Needed Per Week
General (Medicine and Surgery)	6	1,394	27
Pediatric	6	36	0.7
Ophthalmology	6	47	1
Ob-Gyn	6	26	0.5
ENT	6	26	0.5
Orthopedics	6	22	0.5
Dermatology	6	21	0.5
Psychiatry	3	73	1.5
Totals		1,645	32.2

A three hour physician unit is the amount of time one physician would need to spend in the clinic during a specified clinical period. For example, the 27 three-hour physician units needed to work in the general medical clinic each week could be supplied by five different internists or surgeons working 5.4 clinics per week or the number of physicians could be three with a corresponding increase in the number of clinics worked per week.

From Table 18 it can be seen that regularly scheduled weekly clinics in general medicine and psychiatry would be needed. The other specialties could be arranged on an hourly basis each week or every two weeks when possible.

In addition to those visits made for industrial and preventive services by students and employees, an average of 39 patients per day would be seen in the health center, using the yearly number of work days as 250. These 39 patients would require a minimum of four examining rooms, if both morning and afternoon clinics utilized them.

The cost to the hospital of physician time could be approximated at $10.00 per hour. The total number of physician hours required to provide the clinical services listed in Table 18 is 4,935. From Table 19 it can be seen that 368 specialty physician units or 1,104 physician hours are needed to provide employee industrial care. Adding the 4,935 physician hours necessary to provide the clinical services of Table 18, to the 1,104 physician hours of Table 19, gives a total of 6,039 specialty physician hours necessary to provide the outpatient care (including preventive and industrial care to employees and students) in the proposed comprehensive health care plan. At $10.00 per hour, the total cost

of the specialty physician hours is $60,039.00

TABLE 19

NUMBER OF SPECIALTY CLINIC VISITS NEEDED TO PROVIDE EMPLOYEE INDUSTRIAL CARE EACH YEAR

Specialty	No. of Visits For Employee Industrial Care	No. of 3 Hour Physician Units Needed Per Year
General (Medicine and Surgery)	634	106
ENT	206	34
Ophthalmology	162	27
Ob-Gyn	156	26
Orthopedics	112	19
Dermatology	474	79
Oral Surgery	462	77
Totals	2,206	368

3 Hours per clinic x 368 physician units = 1,104 physician hours.

If the physicians worked a total of six clinic hours per day, the total number of physicians working each clinical hour would be approximately four. The number of nurses necessary to assist these physicians would be one for each physician and one additional head nurse, for a total of 5. Necessary clerk personnel has been estimated at one for every 1,000 to 1,500 patients; thus, two clerks would be required.

The total number and salaries of the various personnel needed to provide medical care for the employees, students and student families, including preventive and industrial services for all employees and students, are summarized in Table 20.

TABLE 20

NUMBER AND SALARIES OF PERSONNEL IN THE HEALTH CENTER NEEDED TO PROVIDE MEDICAL CARE SERVICES, INCLUDING PREVENTIVE AND INDUSTRIAL SERVICES TO ALL EMPLOYEES AND STUDENTS

Position	Number		Salary
Physician, Administrative Head	1		$17,000.00
Physician, Clinical	4	$15,009 ea.	60,039.00
Head Nurse	1		5,000.00
Nurse, Clinical	6	$ 4,800 ea.	28,800.00
Clerk	4	$ 2,500 ea.	10,000.00
Total			$120,839.00

It will be recalled from Chapter II that in addition to the specialty clinic visits necessary for employee industrial care, one physician, two nurses, and two clerks were required to provide industrial and preventive services to employees and preventive services to students.

In order to help the hospital with these salary costs, each employee and student enrolling in the program would be charged a fee of $20.00 per year. Students could enroll their families for $15.00 per year. These fees would total $39,440.00 or about one-third of the total cost for personnel.

All other medical care costs including hospitalization, X-rays, laboratory charges, etc. would be insured under a major medical care plan. The insurance premium would be paid by the individual patient or family.

After regularly scheduled hours, the Health Center would provide emergency care for enrolled patients, if and when such care were needed. The physician on duty would spend his call at the Health Center. This physician could be a member of the house staff or any physician on the

regular staff, and would be paid a certain amount for each night's duty. House calls would not be provided. Rather, an ambulance service for emergency calls could be furnished. However, the patient would pay a fee for the ambulance service, as well as a small fee for the emergency physician visit. The emergency call physician would have the choice of treating the patient or hospitalizing him. He would have emergency consultation of Health Center staff members available at all times.

The high cost to the hospital of providing physician care for this group of enrolled employees, students and families is recognized. One method of decreasing this cost to the hospital would be to use members of the house staff as clinic physicians. Ideally, these house staff members should be senior residents, and they should receive some compensation for their work. In addition to the regular house staff that could be employed in the clinics, the Health Center would afford an opportunity for a teaching program in family medicine, and residents in this program of family medicine could also be employed in the clinic.

Certainly no comprehensive health care plan is composed of clinical services only; clinical services are only a part of comprehensive health care. Programs in environmental health and safety and in research are only two possibilities that could be added. The possibilities for research have already been discussed briefly. Programs in environmental health and safety would include inspections of student housing, dietary facilities for the hospital community, radiation hazards within the hospital community, industrial hazards, and a program of accident prevention and control. Additional clinical services that would need eventual provision in order to give complete care would

be those involving dental care. Routine dental care is not generally being insured or provided in comprehensive programs at present. Eventually, these would need to be covered.

CHAPTER IV

EVALUATION OF A COMPREHENSIVE PREPAID MEDICAL CARE PLAN

The value of group prepaid comprehensive health care plans is by no means a recent discovery. It has been recognized for many years that medical care furnished by a group of physicians is more economical than that given by a single physician with multiple referrals to specialists outside his own practice and frequent hospitalizations for diagnostic procedures requiring expensive equipment and laboratory studies.

In 1932 the majority report of the Committee on the costs of medical care was published. This committee consisted of 50 leaders in fields of medical practice, public health, the social sciences, and the public. The three major recommendations of this report, entitled "Medical Care for the American People", were the following:

> 1. That medical services, preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists and other associated personnel, organized preferably around a hospital, for rendering complete home, office and hospital care.
>
> 2. That the costs of medical care be placed on a group prepayment basis through the use of insurance, through the use of taxation, or through the use of both of these methods.
>
> 3. That the study, evaluation, and coordination of medical services be considered important functions of every state and local community; that agencies be formed to exercise these functions; and that co-ordination of rural and urban services receive special attention[1].

Although many good plans in prepaid group medical care have

developed over the past thirty-four years, certainly this has not become a major method of delivering medical services today. The recent Medicare legislation has probably done more than any single factor to dispel the medical profession's apathy about, and at times, frank disapproval of, this form of medical care.

According to Falk[5], there are 750 to 1,000 prepayment plans in operation in the United States today; these plans cover some ten million people. Half of these people have broad, comprehensive coverage by the prepayment plans. Most of the prepayment plans are sponsored by employers, employees, unions or combinations of the three. The comprehensive services are provided by two general means. One of these is by closed-panel group practices, and the second is by means of open panels of physicians who are paid for their services to their patients on a "fee-for-service basis"[5]. Examples of the open panel plans are Washington (State) Physicians Service, which incidentally, began in 1918, and Group Health Insurance of New York. The closed panel plans are better known; examples of these are the Kaiser plans of the West Coast and Health Insurance Plan on the East Coast.

The most frequent subscribers to these prepaid medical care plans, both open and closed panels, have been the labor unions. Besides the plans the unions utilize in their own communities, some unions have built their own clinics and hospitals and have hired their own physicians to care for their employees and employees' families. Labor unions, however, are not the only utilizers of prepaid health care plans. The Harvard University Health Services provides prepaid comprehensive health care for its students, faculty and employees through the operation of extensive

outpatient clinical services and of their own hospital. For those procedures they do not feel equipped to handle, the services of the hospitals associated with the Harvard Medical School are utilized. At the present time, medical care is not provided for any family members.

In some of the prepaid plans, the consumer group has a substantial representation in the policy-controlling board, as in the Health Insurance Plan of Greater New York, while in others, such as the Kaiser plans, they are not represented. In the plan proposed for students and employees in this paper, representation of the student body and employees on a policy-controlling board, both in the planning stages of such a Health Center and afterwards, during its operation, would be of great value. Such a board would provide a meeting ground of the administrators of such a plan and its consumers.

If we have been convinced that prepaid group medical care is cheaper than care received from solo practitioners on a fee-for-service basis, then we must ask ourselves whether the care received is as good as that obtained from a fee-for-service solo practitioner. Proponents of prepaid group practice present convincing statistics that show not only decreased hospitalization and surgical procedures in those who purchase prepaid group practice care when compared with comparable populations of solo practice utilizers, but they also provide statistics which indicate that their subscribers have: decreased perinatal death rates, fewer abortions in pregnant women, a lower death rate for babies during their first seven days of life, lower prematurity rates, and a higher average infant birth weight[1].

Perhaps a reason for these improved statistics in the gestational

and perinatal periods, as well as the decreased hospitalization rates, is due to enforced medical standards over the practicing physicians and their constant supervision. Another reason would be that prepaid group-practice patients seek the aid of a physician earlier and more frequently than do those persons who must pay a fee for each visit they make to the physician.

Weinerman has described patients' attitudes towards group practice[19]. Patients enrolled in plans utilizing either group practice on a prepaid basis or a fee-for-service private practitioner, are more concerned with the comprehensiveness of the program than with the method of payment. They are also concerned with the availability of their physicians to their own needs[19]. They desire a warm and close relationship with their physician, no matter what type of medical care plan they purchase.

Once patients have enrolled in group practice plans, do they utilize only the services of the group physicians? Studies of Health Insurance plan members have shown that 15% of those purchasing the plan use other physician's services[19]. These 15% seem to be the more "discriminating consumers", that is, they have a higher education and the longest average tenure within the plan. It is not known, however, whether this 15% is higher than that percentage of the general population, described as the "doctor-shoppers", or those who use the services of many physicians.

Patients have the same criticisms of their physicians in group practice as do the patients of solo private practitioners, that is, that there is lack of personal communication and personal interest, not

enough home calls, and that the physicians are relatively inaccessible.

On the other hand, Wienerman also describes the attitudes of the group physicians toward their patients. These physicians felt that their patients had lower incomes than, in fact, they did, and that they requested physician services more often than they needed to.

Thus, no matter what type of physician-patient practice, whether group or solo practice, there are always the dangers of misinformation and of depersonalization of the relationship between physician and patient. Developers of any care plan must be constantly mindful of this danger, both during the planning stages as well as during the practice of the plan, so as to forewarn and educate its physicians of it.

The employees and students of a teaching hospital have been chosen in this paper as the specific group for which a prepaid group medical care plan has been devised. Providing medical care through such a plan, in which the hospital contributes a substantial amount of money toward its support, would seem justified. Since the days of Hippocrates, physicians have attended to the medical care needs of their students and of their students' families. The great majority of the 787 students considered in this paper are medical students or house-staff physicians. The remainder are students of the allied medical sciences. The responsibility of any University in providing its students medical care is well established in most Universities throughout the United States.

Employee-care, except for the precedents already long set by industry, is less obviously justified. First, we must think of the kinds of people a hospital employs. Many of the employees are what has been termed "marginal workers", who because of their own health problems, seek

work in a hospital setting. These people are generally underpaid and cannot afford proper medical care. By the fact that hospitals do not pay adequate wages in many areas, the employment of these "marginal workers" is perpetuated as these people are unable to obtain better paying jobs elsewhere. The employment of other low paid personnel such as house-staff physicians and dedicated nurses is achieved through the hospital's appeal to their sense of self sacrifice and their desire to be of service to others. Since hospitals persist in supplying minimal remunerations to their personnel, medical services to them would be one means of elevating the pay scale without actually increasing their salaries. These reasons are in addition to the obvious one of having healthy personnel, well educated in the concept of good medical care, treating and caring for patients.

CHAPTER V

SUMMARY

A plan for a comprehensive community health center to meet the medical care needs of the employees, students, and students' families is presented. Financial support of the plan would be through (1) hospital provision of preventive and industrial care to employees and students, a program similar to the one it presently provides, (2) hospital provision of the physicians required to give complete outpatient medical services to enrolled employees, students, and students' families, and (3) employee and student payment of enrollment fees as well as their participation in a prepaid insurance program. Those employees not wishing to enroll in the hospital program would have the option of purchasing a comprehensive medical care program using the services of the private physician of their choice. Regardless of the type of comprehensive care plan purchased, either the hospital based plan or the private physician plan, all employees would be provided the outlined preventive and industrial services. It would be compulsory that all students would pay the health fee as well as the supplemental insurance fee. Student families who wished to enroll in the hospital based program would be charged an additional fee.

The historical development of prepaid medical care plans, the reasons behind their growth and predictions about their future growth

are reviewed. The advantages of the association of the teaching hospital with a prepaid comprehensive community health center are presented.

Estimates of preventive and industrial services to students and employees, obtained by reviewing the charts of a sample number of health service patients and tabulating their number and type of visits as they were recorded in their charts, are presented.

Estimates of the number of employees, students, and students' families who would enroll in programs of comprehensive health care, obtained by tabulating the information obtained from student and employee questionnaires, are presented.

The number of physician visits for the population enrolling in the Hospital Community Health Center, and the number of physicians required to staff the outpatient clinics are estimated.

The advantages of providing medical care to Oklahoma Medical Center students and employees are presented. In addition to giving the highest caliber of medical care, a comprehensive, prepaid plan of providing medical care would seem to be the most economical one.

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APPENDIX A

EMPLOYEE QUESTIONNAIRE

Please return this questionnaire to the person who gave it to you. If you are a graduate student or house staff, do not fill out. A separate form will be furnished graduate students and house staff.

Do Not Sign

1) Your Age _____ Sex _____ Marital Status: Mar. ____ Sing. ____ Wid. ____ Div. ____ Sep. ____

2) Husband or Wife (underline which) Age: _____

3) Total Number of Unmarried Children _____

	Male		Female
Ages:	_____	Ages:	_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____

4) Do you have the following insurance?:

Hospitalization Insurance? Yes_____ No _____ Don't know _____

Name of insuring agency, if known:_____

Physician care insurance? Yes _____ No _____ Don't know _____

Name of insuring agency, if known:_____

5) Does this insurance also cover:

Your husband or wife?

Hospitalization insurance: Yes _____ No _____ Don't know _____

Physician care insurance: Yes _____ No _____ Don't know _____

Your children:

Hospitalization insurance: Yes _____ No _____ Don't know _____

Physician care insurance: Yes _____ No _____ Don't know _____

Appendix A Continued

6) A prepaid medical care plan is one in which the individual purchases an insurance policy which then covers all or part (depending upon the plan) of care that a person may need.

If a program of prepaid medical care (including hospitalization, doctor's office calls, emergency care) were offered to you in which the following conditions were met,

a) You would choose a doctor from a prepared list of well trained doctors who are either in private practice in the Oklahoma City area or are on the medical school faculty.

b) Your employer contributed a part of the necessary cost for such a complete medical care program.

c) The cost to you of the program would be less than the current Blue Cross, Blue Shield rates for this area:

Would you purchase such a plan?

Yes _____ No _____ Don't know _____

7) If you could continue to use your present private physician under a plan as described in No. 6, would you purchase such a plan, (with the exception of condition 6a)?

Yes _____ No _____ Don't know _____

APPENDIX B

DIVISIONS WITHIN EACH DEPARTMENTAL GROUP OF EMPLOYEES RECEIVING QUESTIONNAIRES

GROUP I. Basic Science, Research and Teaching (one-half of graduate students, 93, subtracted from total).

Division	Number Sent	Number Returned
Anatomy	27	13
Biochemistry	19	0
Division of Medical Science	2	1
Environmental Health	15	11
Library	12	12
Medical Illustration	2	0
Microbiology	32	14
Pathology	23	11
Pharmacology	31	6
Physiology	32	20
Preventive Medicine and Public Health	115	46
School of Nursing	27	26
Speech and Hearing	38	15
Cytology	16	10
Continuing Education	7	0
Physical Therapy	25	11
GROUP II. Service Departments		
Animal House	16	0
Dietary	157	22
General Services	155	111
Laboratory Medicine	79	50
Orthopedic Appliance	3	0
PBX	16	14
Pharmacy	3	3
Physical Plant	68	64
Pre-school Nursery	7	7
Social Service	15	13
Steno Pool	5	5
Surgical Pathology	7	2
Volunteers	12	12
GROUP III. Business and Administrative Offices		
Accounting	22	10
Admitting (Main)	28	15
Admitting (Children's)	8	7
Alumni Office	2	2
Associate Dean	9	6
Business Administrator	2	2

APPENDIX B Continued

	Number Sent	Number Returned
Cashier	23	21
Data Processing	11	9
Dean's Office	10	8
Hospital Administrator	7	4
Medical Records	25	23
Personnel	6	5
Physician's Trust	2	2
Public Relations	2	1
Purchasing	16	14
Research Publications	1	1
GROUP IV.		
Nursing Service	600	230
GROUP V. Clinical Departments (Residents and Dept. of Psychiatry subtracted from total sent)		
Anesthesia	39	13
Dermatology	24	2
ENT	10	5
Gyn-Ob.	23	9
Health Service	7	7
Heart Station	16	7
Medicine	195	53
Tumor Clinic	6	3
Ophthalmology	7	2
Oral Surgery	12	3
Orthopedic Surgery	12	5
Pediatrics	100	64
Psychiatry	110	0
Radiology	56	36
Surgery	20	7
Urology	14	2

APPENDIX C

STUDENT QUESTIONNAIRE

1) Indicate appropriate classification:

_____Graduate Student _____ Medical Student _____ Nursing Student

_____House Staff

2) Marital Status:

_____Single _____ Married _____ Divorced

3) Number of children: _____ Ages:_____

4) As a (graduate student, medical student, nursing student, or house staff officer) do you feel that while you are in training, the University of Oklahoma
_____ should provide you with complete medical care (including hospitalization).
_____ should provide you with partial medical care.
_____ has no responsibility for your medical care.

5) If the University were to take complete responsibility for all your medical care needs, would you be willing to contribute a health fee, not to exceed $20.00 per semester, toward that care?
Yes _____ No _____ Don't know _____.

Do you think this fee of $20.00 is too high _____ too low? _____.

<u>6 and 7 are for married individuals only</u>

6) In addition to the health fee above, would you pay an insurance premium to purchase complete health care for your spouse and/or children?
Yes _____ No _____ Depends on cost _____

7) Approximately how much do you spend for medical care insurance (physician care insurance and/or hospitalization insurance) for you and your family per year? _____