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Gatekeeping Access to Emergency Departments: A Survey of HMO Policies

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LOYOLA UNIVERSITY CHICAGO

GATEKEEPING ACCESS TO EMERGENCY DEPARTMENTS:
A SURVEY OF HMO POLICIES

A THESIS SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING
DEPARTMENT OF NURSING

BY
REGINA CONWAY PHILLIPS

CHICAGO, ILLINOIS

MAY 1994

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To God be the glory. First giving honor and praises to God through which all things are possible.

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To Eugene, Willie Mae and Josephine with all my love

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CHAPTER I INTRODUCTION

Purpose

The purpose of this study is: (1) to determine if the practice of "gatekeeping" to control access to emergency departments by clients is a prevalent practice in nationwide Health Maintenance Organizations (HMOs); (2) to determine if a consistent HMO-wide definition of "life-threatening " emergency medical condition exists; (3) to delineate emergency triage systems used by HMOs; (4) to determine what medical directors perceive is the impact of gatekeeping access to emergency department (ED) services on the timeliness of HMO members receiving ED services; and (5) to see if differences exists in for-profit and non-profit HMO gatekeeping policies.

Significance

With the rise in health care costs and health care reform on the horizon, it is conceivable that the entire health care system will be converted to a managed care system. HMOs and other managed care organizations have developed a variety of methods to control health care costs. "Gatekeeping" to control access to emergency departments is one method used by HMOs to control health care costs.

Utilization of emergency departments is costly whether or not the medical problem is life-threatening (urgent) or non-life threatening (non-urgent). Studies have indicated that as many as 50% to 82% of emergency department visits are for non-life

threatening conditions. (McNamara, Witte, & Koning, 1993; Shesser, Kirsch, Smith & Hirsch, 1991). Therefore, diverting persons with nonlife-threatening conditions away from emergency departments to less expensive care settings is a way to make health care more cost effective.

"Gatekeeping" is defined by Craig (1990) as a cost containment mechanism used by managed care organizations to reduce costs and appropriate medical services. While there are several studies in the literature which discuss gatekeeping practices among the Medicaid populations, little information on outcomes of gatekeeping in non-Medicaid HMO populations exists. A study by Hurley, Freund and Taylor, (1989a) was conducted in four of the Nationwide Medicaid Competition Demonstration sites. This program incorporated components of capitation, case management, and limitation of freedom of choice. The study examined the impact of primary care case management (gatekeeping) on patterns of emergency department use. Results indicated a reduction in emergency department use ranging from 27% to 37% for children and 30% to 45% for adults.

A second study by Hurley, Freund, and Taylor (1989b) was conducted in the Missouri Managed Health Care Project which is a component of the primary care case management demonstration project known as the Nationwide Medicaid Competition Demonstrations. This program required all Aid to Families with Dependent Children (AFDC) recipients to enroll in one of five prepaid health plans that were to manage all Medicaid services except prescriptions and long-term care. These plans included an independent practice association (IPA)-type HMO, two

university teaching hospitals, and two neighborhood health centers. The five plans received capitation payments from the state Medicaid agency for services covered. A sixth plan (the Physician Sponsor Plan or PSP) permitted primary care physicians to become case managers. These physicians were paid fee-for-service for direct care and a case management fee as compensation for the availability and authorization responsibilities.

The goal of this study was to examine the impact of a primary care case management program on reducing the use of the emergency department as a source of nonemergency care. The study findings provided evidence that primary care gatekeeping programs significantly lowered reliance on the emergency departments for nonurgent conditions. "The reductions in reliance on the emergency departments were associated with a higher percentage of visits for "true" emergencies. This finding is particularly obvious in the IPA and PSP plans, where more than 70% of emergency department visits are subjectively reported as necessary" (Hurley et al., 1989b, p. 69).

A third study (Warren, Bell, Isikoff & Hale, 1991) was conducted at the University Family-Care, which is a prepaid health plan under contract with the state of Arizona. This program provides comprehensive Medicaid services to enrollees. The primary care physicians acted as the gatekeepers and coordinators of all care for the enrollees including, access to emergency department services. This study concluded that gatekeeping functions lead to control of unnecessary use and costs of emergency department services. These findings provide

a rationale for HMOs and other managed care systems to continue to use gatekeeping as a means of cost containment. However, they are limited to a medicaid population.

As HMOs become more prominent providers of health care services and as financial constraints increase, the issue of how to maintain easy access and yet limit inappropriate use of emergency medical care systems is one that will have to be addressed by all parties concerned (Durstun, 1987). This study will identify the frequency of HMO's use of "gatekeeping" practices, describe the emergency triage systems used by the HMOs and ascertain if there is a standardized definition of a "life-threatening emergency" medical condition. The findings from this study should provide information for both providers, payors and consumers concerned about gatekeeping as a way to control access to emergency services in managed care populations.

Definition of Terms

Franks and Clancy (1992) defined "gatekeeping" as the process of matching patients' needs and preferences with the judicious use of medical services. The "gatekeeper" is examined from two perspectives: that of an advocate who can protect patients from the possible adverse effects of unnecessary care, and that of a critical decision maker who can ensure the appropriate use of health care services (Franks & Clancy, 1992).

The United HealthCare Corporation (1992) defines "gatekeeping" as a model which serves as the patient's initial contact for medical care and referrals. Kerr (1989) defines

"gatekeeping" as a process involving both the giving of medical advice and the controlling of resource allocation.

Warren, Bell, Isikoff, and Hale (1991) defined "gatekeeping" of emergency services as a process consisting of:

- (1) the opportunity to provide telephone advice to concerned patients or parents;
- (2) direction of the patient to the appropriate level of service;
- (3) discouraging patients from using the emergency department (ED) as a source of primary care;
- (4) verification of eligibility of the patient in a plan and authorization of payment for services; and
- (5) control of unnecessary use and costs of the emergency services. (p. 741)

For the purpose of this study, "gatekeeping" is defined as a method of controlling both health care costs and appropriate use of medical services by requiring clients to obtain approval prior to accessing emergency medical services. "Gatekeeping" is operationally defined in questions #11 and #15 of the questionnaire (Appendix A).

Orr, Charney, Straus, and Bloom (1991) define "access" as 24-hour, 7-days-a-week availability of a staff physician to clients for the purpose of obtaining medical advice and medical guidance to the appropriate level of medical care. Hurley, Gage and Freund (1991) define access as unrestricted beneficiary choice of providers of medical care including emergency medical services. Warren et al., (1991) view access as advice, redirection and quality options available to clients seeking emergency medical care on a 24-hour basis.

For the purpose of this study, "access" is defined as unrestricted choice of emergency medical services. Access is operationally defined in question #10 of the questionnaire (Appendix A).

Triage has been defined as "the classification of sick, wounded or injured persons in order to ensure the efficient use of medical and nursing manpower, equipment, and facilities" (Tabers 1973, p. T-64). Webster's Dictionary and Thesaurus (1992) defines triage as "the sorting or screening of patients seeking hospital care, to determine which service (e.g., medical, surgical, or nonphysician) is initially required and with what priority" (p. 1052).

For the purpose of this study "triage system" refers to: (a) the staff used by an HMO to provide advice (i.e., physician, nurse, or emergency medical technician) in emergency situations; and (b) the instructions given to the clients directing them to appropriate medical services (i.e., clinic, emergency department, emergency medical system - 911, or privately contracted ambulance services). Triage system is operationally defined by questions #12 and #13 of the questionnaire. (Appendix A).

The American College of Emergency Physicians Board of Directors (1983) approved the following definition of "bona fide emergency":

Services provided in hospital emergency facilities after the onset of a medical condition manifesting itself by symptoms of sufficient severity that the absence of immediate medical attention could reasonably be expected by a prudent layperson, possessing an average knowledge of health and medicine, to result in placing health in jeopardy; serious impairment to bodily functions; serious dysfunction of any bodily organ or part; or development or continuance of severe pain.

Examples of covered conditions include:

Any condition resulting in admission of the patient to a hospital within 24 hours.

Evaluation or repair of acute (less than 72 hours) trauma.

Relief of severe pain.

Evaluation and/or treatment of acute infection.

Obstetrical crises and/or labor.

Hemorrhage or threat of hemorrhage.

Shock or impending shock.

Investigation and management of suspected abuse or neglect of person which, if not interrupted, could result in temporary or permanent physical or psychological harm.

Decompensation or threat of decompensation of vital functions such as sensorium, respiration, circulation, excretion, mobility, or sensory organs.

Management of a patient suspected to be suffering from a mental illness and posing an apparent danger to the safety of himself, herself, or others. (p. 98)

The Deficit Reduction Act (1984) defines "bona fide emergency" as:

Services provided in a hospital emergency room after the sudden onset of a medical condition manifesting itself by acute symptoms of sufficient severity (including severe pain) such that the absence of immediate medical attention could reasonably be expected to result in placing the patient's health in serious jeopardy; serious impairment to bodily functions; or serious dysfunction of any bodily organ or part. (p. 1082)

In the Code of Federal Regulations (§ 417.401, 1992), Health Care Financing Administration (HCFA) defined emergency services as:

Covered inpatient or outpatient services that are furnished by an appropriate source other than the organization and are needed immediately because of an injury or sudden illness, and the time required to reach the organization's providers or suppliers (or alternatives authorized by the organization) would have meant risk of permanent damage to the patient's health. (p. 497)

For the purpose of this study, the terms "bona fide emergency"; "life-threatening emergency"; "real or true-emergency"; and "medical emergency" will be used synonymously and defined as any sudden, unexpected, serious medical condition that is a potential or real threat to life or limb, requiring immediate action or medical intervention; as perceived by the patient, his family, or whoever assumes the responsibility of bringing the patient to the emergency department. "Life-threatening emergency" is operationally defined in question 16A and 16B of the questionnaire.

To further clarify individual HMO's triage procedures, gatekeeping policies, and the HMO's definition of life-threatening emergency; the HMOs were also asked to send a copy of their membership brochures that included reference to client instructions on obtaining emergency medical care.

Research Questions

The research questions addressed in this study are: (1) How prevalent is the practice of "gatekeeping" among HMOs?; (2) Is there a consistent HMO-wide definition of "life-threatening" emergency medical condition?; (3) What are the different types of triage systems utilized by HMOs?; (4) What do medical directors perceive is the impact of gatekeeping for emergency department services on the timeliness of the HMO members receiving ED services?; and (5) What is the difference between for-profit and non-profit HMO's in gatekeeping for emergency services?

CHAPTER II
REVIEW OF THE RELATED LITERATURE

Gatekeeping

In an essay, Sulmasy (1993), discusses the moral and ethical issues that are to be considered when instituting gatekeeping policies. Sulmasy identifies and distinguishes two forms of "morally problematic" gatekeeping. Factitious gatekeeping is traditionally seen in fee-for-service practices and allows physicians to facilitate patients' access to diagnostic and therapeutic treatments solely to increase income and not necessarily to benefit the patient. This form, according to Sulmasy, is always morally improper.

The second form is restrictive gatekeeping in which financial incentives are used to induce physicians to limit access to care which places the physician in a morally stressful situation. "To do what is best for the patient requires virtue, because helping the patient may result in personal financial loss" (p. 2116). Sulmasy states that since financial incentives are thought to be the most practical way to control health care costs by placing responsibility for access on the individual physician, careful monitoring is required to avoid the potential for undertreating patients in such a system. Monitoring ultimately involves bureaucracy.

In conclusion, Sulmasy states that the Clinton health care plan is designed to control costs by encouraging competition

among insurers and HMOs and that these groups will offer competitive prices by making physicians restrictive gatekeepers. Sulmasy states " the cost savings of restrictive gatekeeping are not worth the ethical price" (p. 2117).

Emergency Department Utilization

McNamara, Witte and Koning (1993) examined the 1991 study conducted by the American Hospital Association and the allied hospital associations in Milwaukee, Seattle, Buffalo, New York, and Dallas/Fort Worth. ED utilization patterns in the larger inner cities have been well documented, however, little had been documented within smaller communities. The study found that at least one out of every three ED visits was for conditions that were not life- or limb- threatening, did not require immediate care, and could have been treated in a primary care setting; and in Buffalo and Dallas/Fort Worth, half of the ED visits were for primary care services (p. 44). Milwaukee hospitals have recently observed a decrease in ED utilization for primary care which has been attributed to more patients, such as those with Medicaid, having enrolled in managed care programs such as HMOs.

Reliance on EDs for primary care is costly and less than ideal for both the patient and the health care system. McNamara et al., cited a 1992 study conducted by the U.S. Department of Health and Human Services' Office of the Inspector General which found that the average ED charge for treating non-urgent conditions was up to five times the cost of a visit to a physician's office (p. 46). In an Ohio State University Hospital study, an estimated \$437 million annually could be saved in Ohio alone if non-urgent ED visits were redirected to

primary care physicians' offices (p. 46). In summary, the authors state that establishing organizations such as managed care programs to provide access to routine preventive and primary health care will decrease the costly practice of utilizing the ED for non-urgent care and control the increasing cost of health care.

Early HMO Studies

Hossfeld and Ryan (1989) conducted a study in which they surveyed a group of Chicago-area HMOs regarding enrollee instructions for use of emergency medical services. Ninety-nine per cent of the HMO respondents advised their members to contact their HMO office or primary physician or to call a toll-free number in the case of an emergency. Only two HMO brochures (7%) of the HMO respondents recommended their members use 911 for access to emergency care. Based on the results of the survey, Hossfeld and Ryan (1989) suggest that HMO enrollees may not be adequately informed regarding proper use of 911 and the emergency medical services system, therefore, supporting Kerr's (1989) findings.

Kerr (1986) conducted a study in which he described the cases of three acute cardiac patients and their referral to the emergency department (ED) by two health maintenance organization triage systems. In case one, a 37-year-old man complaining of heavy substernal chest pain and diaphoresis telephoned his health plan, described his symptoms, and was directed to go to the ED for evaluation. He was driven to the ED by his mother. In case two, a 48-year-old man complaining of heavy left chest pressure with marked diaphoresis, weakness, and shortness of

breath telephoned his HMO and was directed by the triage officer to go to the HMO-designated ED, about 17 miles away, for evaluation. He was driven there, by-passing four other hospital EDs en route. In case three, a 40-year-old man suddenly developed upper chest pressure with diaphoresis, shortness of breath, and heaviness in both arms. He called the physician on call for his HMO and was told to go to the HMO-designated ED, approximately ten miles away, for evaluation. He was driven there, by-passing two other hospital EDs en route. All three cases were diagnosed as having myocardial infarctions. In the discussion, Kerr contends, immediate treatment might have limited the extent of the patients' infarctions and prevented complications. Kerr asserts that the calls to the HMO wasted valuable time and did not generate the immediate care needed and that more time was wasted in the patients' unattended transits to the HMO-designated hospitals.

Kerr (1986) also surveyed seven HMOs in the Milwaukee area and found that they instructed their patients to seek medical attention at the nearest ED if their life is threatened or if there is danger of permanent damage or disability. None of the patient information brochures instructed patients to call paramedics or an ambulance. The patients were instructed to call their physician or a triage number and were warned that if they went to an ED without authorization and in a nonlife-threatening situation, their bill would not be paid by the HMO. Kerr states that, in theory, by "gatekeeping" the physician can direct each patient in the most cost-effective manner, however,

the problem is the failure of the HMOs to actively utilize the EMS system for their patients.

In summary, Kerr states that HMO triage procedures requiring physician permission to use ED services pose a danger to seriously ill patients requiring emergency medical services (EMS) assistance. Kerr goes on to state:

Patients often do not realize that their symptoms are life-threatening and will follow the financially safe, but medically less safe course of calling the physician first, as suggested by HMO instructional literature. Time is wasted in obtaining permission, and telephone advice given may not be appropriate. None of the HMO literature surveyed mentioned EMS services. These administrative requirements are intended to save money by eliminating nonemergency ED visits. They confuse and undermine the delivery of EMS services, about which the public has been heavily educated for more than a decade and which enjoy widespread public support. (p. 729)

In an editorial addressing Kerr's (1986) study, Knopp (1986) identifies four possible explanations for an HMO physician not to request prehospital emergency care. The explanations included: mis-communication between the patient and the physician; inability of the physician to recognize that the patient's symptoms were warning signs of a myocardial infarction; lack of understanding the EMS system; and financial considerations. Knopp states that because most HMO reimbursement is determined by retrospective claims review, "the HMO patients may hesitate to use the EMS system for fear that bills from prehospital care providers or non-HMO EDs will not be reimbursed if the patient's problem is not a "real" emergency" (p. 730).

Knopp (1986) emphasizes that the problem of the decision on what constitutes an emergency remains controversial and that

attempts to maintain stringent control over prehospital and non-HMO ED reimbursement may actually result in an increase in costs and poor medical care and that delays in receiving prompt emergency care may result in prolonged hospitalization, more intensive medical care and medical-legal risks (p. 730).

Knopp (1986) recommends the following action for HMOs in order to avoid severely compromising patient care: base reimbursement decisions on review of the initial presentation of the patient to the emergency medical system by emergency physicians knowledgeable in prehospital care and not on a retrospective review of the final diagnosis; HMOs should work in conjunction with the local EMS system and include information describing the system and methods for accessing it in the membership brochure; physicians and nurses responsible for telephone triage at the HMOs should be educated to err on the side of patient care, not cost containment, and that a well-trained emergency physician is the most appropriate person to establish triage guidelines; finally, HMOs should formally study their triage system to ensure appropriate outcome results (p. 730).

Durston (1987), the director of an HMO emergency department, rebutted the findings of Kerr (1986) and Knopp (1986) and presented a different perspective on the impact of HMOs on emergency medical services by highlighting the fact that Kerr generalizes from three cases that "inherent in the HMO concept is the notion of restricting the allocation of patient services in order to minimize costs" (p. 683). Durston contends that while critics frequently charge that cost-consciousness in

HMOs lead to inappropriate restriction of medical care, this assertion is not supported by scientific studies.

Durston (1987) agrees with Knopp's recommendation regarding HMOs developing a cooperative relationship with the local EMS system and including in patient information brochures instructions on how to access the system. He goes on to state that the HMO in which he is affiliated includes information on access to emergency and prehospital care in its patient information brochure and includes instructions on how to access the county EMS system.

Durston addresses the subject of ambulance misuse and states that "anyone who has practiced emergency medicine in this country has seen patients who abuse ambulance services" (p. 684). Prehospital and emergency care is a limited resource and when one patient wastes health care resources that he does not need, another is deprived of health care resources that would be beneficial. It is not only cost-ineffective, but immoral to allow such practices as abuse of emergency health care resources to go unchecked, therefore, the gatekeeping approach employed by many HMOs is reasonable and have a positive effect on their patients' access to prehospital and emergency care (p. 684.)

In a letter to the editor by Ellis, Ernst, Launius and Karch (1988), the authors address the case report by Kerr and the subsequent editorials and rebuttal articles by Knopp and Durston. Ellis et al., (1988) completed a study of 141 patients with acute myocardial infarction (AMI) and "the results indicated that HMO patients receive care equal to, if not better

than, treatment received by patients with other sources of insurance coverage" (p. 188). The study was done at University Medical Center in Las Vegas which contracts with a mid-sized HMO to care for its critically ill patients. The investigators recorded the mode of transportation used by these patients and the length of time elapsed between arrival in the emergency department and admission to the coronary care unit (CCU) as well as data concerning ECG changes. The findings were as follows:

In the study group of 141 patients, 23 (16%) belonged to the HMO. All but one of the HMO patients (96%) used the EMS system and were transported directly from the scene to the ED. Among non-HMO members, 102 (86%) used the EMS system for transport. Twenty-four minutes elapsed from the time HMO patients arrived in the ED until they were admitted to the CCU. The time required for non-HMO patients was 126 minutes. The results indicate that there is nothing inherent in the HMO structure that prevents patients with AMI from being treated as well or better than patients with more traditional sources of payment. (p. 188)

Catlin, Bradbury, and Catlin (1983) examined the application of the gatekeeping principle within HMOs and described the role of the primary care physicians in the HMOs. The study focused on gatekeeping medical services in general and examined the different model types. A few of the organizational factors that influence HMO performance include the profit-nonprofit orientation of the HMO, the method of physician reimbursement, and the organizational control of access to services. Catlin et al., concluded the primary care gatekeeper policy is one that may impact health care costs by controlling the utilization of other services (p. 678).

Craig (1990) explored the legal risks posed by the HMOs' policy of gatekeeping access to emergency departments. The author points out several facts leading up to the discussion of

legal risks. First, the large share of health care resources that have been allocated to developing emergency departments (ED), the emergency medical system (paramedics), and the trauma network. The high cost of using these systems have contributed to the rise in health care costs and insurance (p. 136).

Second, Craig identifies three basic forms of gatekeeping to control ED access. The most widely used type is retrospective review of ED visits and ultimate denial of benefits for visits determined to be medically unnecessary. Two forms of prospective gatekeeping are also the most highly criticized. The most common form of prospective gatekeeping is pre-authorization which requires the member to telephone the HMO office, or 24-hour number, to obtain permission to proceed to an ED or be directed to a more appropriate, cost effective resource (p. 136). Many of the HMOs distinguish between life-threatening and nonlife-threatening situations, and only allow the members to bypass the pre-authorization requirement in a life-threatening situation (p. 136). Craig notes, "the subscriber's ability to determine what is life threatening is a key element" and that "only a minority of HMO brochures given to subscribers attempted to define an emergency or life threat" (p. 136). The second prospective form, which is the third form of gatekeeping, is the practice of only allowing members to use specified EDs. Craig notes that no reliable studies have documented a detrimental effect of this form of gatekeeping, but goes on to cite Kerr's 1986 study to highlight the potential risks of practicing this form of prospective gatekeeping.

Third, Craig discusses the direct and indirect financial incentives offered to physicians to limit authorizations to EDs. Direct incentives are observed more often when individual gatekeepers are associated with a capitation model usually a group or network model HMO. In the capitation model the less money spent on the subscriber means more profit for the gatekeeper (p. 136). Indirect financial incentives are generally employed in staff model HMOs in which the gatekeeping risk is shared by the HMO corporation and the financial reward for refusing to authorize ED utilization is less (p. 136). The indirect financial incentive is evidenced when the HMO refuses to renew the contract of salaried physicians who over-utilize services, therefore, indirectly impinging on the clinical decision making of the physician (p.136). Craig states that "the indirect incentives may achieve cost containment goals without risking dangerous interference with the quality of care" (p. 142).

In discussing the legal risks of gatekeeping policies, Craig points out that although HMO pre-authorization policies tend to usurp the control physicians have over both the course and scope of treatment, the treating physician still has the ultimate legal duty to provide the HMO subscribers with high quality medical care that meets the unitary standard of care despite the HMO's refusal to authorize the treatment (p.137). Craig states, "if the physician fails to provide treatment because the HMO refuses authorization, he or she will likely still be liable to the patient for malpractice" (p. 137).

Craig also discusses the legal risks involved in gatekeeping via the telephone "which involves triaging, resource allocation, and giving medical advice" (p.140). The difficulties involved in providing telephone triage include the members' ability to communicate which can be limited by age, language barriers, or emotions; the limitation of thorough clinical information required to make a triage decision with reasonable safety; and the ease with which the distinction between common non-urgent conditions and life-threatening conditions can be missed over the telephone (p.140). There is the potential danger for the member to accept the non-urgent classification of the triage person without question when a true emergency in fact exists. Therefore, Craig suggests that gatekeepers must routinely warn members of the intrinsic limitations of telephone assessment and advise them that denial of pre-authorization should not prevent the member from obtaining treatment (p. 141).

In conclusion, Craig suggest that HMOs re-examine their gatekeeping policies, the incentive behind them and give the members complete and accurate information regarding benefits, gatekeepers, and access to services (p. 144).

Telephone Triage

In a recent study by Poole, Schmitt, Carruth, Peterson-Smith, and Slusarski (1993) an after-hours telephone program (AHP) was instituted in Denver to address the issues of after-hours telephone calls to pediatric physicians. The system used specially trained pediatric nurses with standardized protocols to provide after-hours telephone triage and advice for patients

of pediatricians in 56 practices in Denver. Experienced pediatric nurses, trained in the use of protocols, addressed four issues during each phone call: assessment, triage, advice, and access to care. The study was conducted in four years. The results were 107,938 calls were successfully managed without an adverse clinical outcome (p. 670). After-hours phone calls necessitated an emergency department visit 20% of the time at a ratio of one ED referral for every five calls, and required one after-hour hospital admission out of every 88 calls. Over half (52%) of the patients were managed with home care advice only. Of all patients directed by the telephone triage nurse to the ED, 78% were determined to have a condition warranting ED care. Satisfaction among pediatricians was 100%, and among parents was 96% to 99% on varying issues. The study concluded that telephone triage systems staffed by non-physicians can be effective and well-received by patients and primary physicians.

Buckles and Carew-McColl (1991), evaluated a standard emergency department triage system that had been in place for two years. The system provided insights into reasons why people attend emergency departments, such as, many patients had little perception of their own problems or where the best place was to have them treated. Rather than use a detailed protocol, the authors decided to develop a decision framework as to how the triage nurse would conduct the activities of the patient; these included patient requires ED attention, patient could be handled by ED or primary care physician (PCP), patient could and should see PCP, patient requires help from another source, and problem was totally inappropriate for attendance (p. 26). This study

concluded that the extended telephone triage system staffed by nurses provided better access to the ED, provided immediate personal care to the patient, and provided answers for those in doubt as to the appropriate course of action to take in a situation.

Evans, McCabe, Allen, Rainer, and Richmond (1993) assessed the standard of advice given by telephone by emergency department (ED) following patients' enquiries. The patient enquiries were simulated and a telephone questionnaire was completed. The results achieved were that overall, correct telephone advice was given to 74% of the patients; 62% of the calls were handled by nursing staff who gave correct advice 68% of the time. The ED did not have a formal policy or provide staff training for handling telephone triage. The study concluded that with proper training and a standard protocol, patients' medical conditions could be assessed accurately via a telephone triage system staffed by nurses.

HMO Study Being Replicated

Given all of the preceding literature, this study will replicate a study done by Kerr (1989) in which he evaluated HMO policies regarding access to emergency departments. Kerr's assumptions regarding HMOs and access to emergency care were that: (a) the telephone is an imperfect screening modality and (b) gatekeeping is economically motivated and interferes with the delivery of prompt treatment of emergencies.

The sampling frame used by Kerr (1989) included a list of the names and addresses of all "federally qualified" HMOs. "Federally qualified" HMOs are those that have applied for and

been found to provide basic and supplemental health services to members in accordance with the HMO Act of 1973. These organizations meet other requirements relating to fiscal soundness, marketing practices, grievance processes for members, quality assurance mechanisms, continuing education for staff and membership representation on the HMO board of directors as determined by the U.S. Department of Health and Human Services (HCFA, §§ 417.140-417.144, 1992).

At the time of Kerr's 1989 study, three hundred seventy-four HMOs were listed, representing 40 states and the District of Columbia. Using a 1987 list, Kerr made selections by state rather than at random from the list because of variations in state laws and the affect of those laws on local HMO operation. One third of the HMOs listed in each state were contacted. One was contacted if the state total was less than three. If one organization listed several HMOs in a given state, only one was contacted. This led to a total of 130 HMOs contacted.

Kerr's (1989) questionnaire was developed from review of the emergency services sections of patient information brochures obtained from 11 federally qualified HMOs not selected for the study and representing ten states. The cover letter and questionnaire was given to physician volunteers not involved in the survey prior to mailing. Their responses and comments were used as a basis for internal consistency.

Kerr (1989) surveyed medical directors of HMOs using a mailed questionnaire to assess policies regarding emergency department access:

One hundred thirty letters and questionnaires were sent, eight were returned because of incorrect address

or no forwarding addresses. The study group was made up of the 122 remaining letters. There were 98 (80.3%) respondents, representing 26 per cent of all federally qualified HMOs in the United States. Of the 98 respondents, 92% used the distinctions "life-threatening" and "nonlife-threatening" in defining their emergency department access policies. In life-threatening situations, members were permitted to go to any hospital without calling the gatekeeper first. In nonlife-threatening situations 80% required that permission be obtained prior to an emergency department visit. Most required a telephone call; nonphysicians could act as gatekeepers in 59%. Thirty-nine percent limited their members to using the emergency departments of certain hospitals only. Ninety-six percent reviewed all emergency department visits prior to making any payment. (p. 275)

CHAPTER III

ASSUMPTIONS

The first assumption of this study is that gatekeeping is consistent with the philosophy of HMOs who rely on primary care providers to control access to health care services and direct consumers to most appropriate provider/services.

A second assumption implicit in this study is that gatekeeping is a cost control mechanism which may be used by HMOs to discourage ED use and that restricting use of ED services could impact on the health status of the enrolled population.

The third assumption of this study is that there should be no significant differences in the gatekeeping policies of HMOs that are for-profit and non-profit.

A fourth assumption of this study is that telephone triage is a frequently used method of triaging members to provide advice and direct them to the appropriate level of health care.

CHAPTER IV METHODOLOGY

Design

This is a descriptive study that is a modified replication of the survey done by Kerr (1989) using a mailed questionnaire and a sample of federally qualified HMOs.

Instrument

The instrument to be used in this research is the questionnaire used in the survey conducted by Kerr (1989) with modifications and additions (Appendix A). The 17-item questionnaire includes five items that ask for demographic information about the responding HMO. Three items ask for emergency medical services available in the responding HMO's community. Four items ask for information about emergency department access and utilization. Two questions refer to the HMO's triage system. Finally, one item questions the HMO's distinction between "life-threatening" and other emergencies and how the information is promulgated to the members.

Sample

The sampling frame is the national listing of federally qualified HMOs and eligible Competitive Medical Plans (CMPs). The (1993) list consists of 474 HMOs located in 47 states. A sample of HMOs from each state were surveyed. All HMOs were included in states having three or less HMOs to avoid underrepresentation of those states. States having four or more

HMOs were surveyed as follows: (a) all HMOs assigned numbers 1,2,3..N; (b) all HMO's assigned an even number were selected; (c) in states having an odd number of HMOs all even numbered HMOs plus one were selected. Using this sampling methodology, a total of 263 HMOs were selected to be included in the initial mailing.

Replacement sampling was used during the first two weeks of the study. Fifteen questionnaires were returned shortly after the first mailing because of expired forwarding orders. These sampling units were replaced by HMOs from the same state. After the first two weeks, all subsequent questionnaires that were returned because of expired forwarding orders were not replaced. There was a total of fifteen. Five additional questionnaires were returned because the receiving organization was not an HMO. Therefore, the study sample was 243 sampling units.

Data Collection

Data collection began January 1st and ended February 18, 1994. The questionnaire was accompanied by a cover letter explaining the purpose of the study, the method of maintaining confidentiality and requesting an HMO membership brochure with information for consumers which includes reference to instructions on obtaining emergency care (Appendix B). A self-addressed stamped envelope was enclosed with each questionnaire. Participants were directed to use the numbered envelopes to return the questionnaire and a membership information brochure. The numbering of return envelopes allowed tracking of respondents and non-respondents and maintenance of confidentiality. A second letter and questionnaire was mailed

to non-respondents two weeks after the first mailing and a third mailing four weeks later was sent to assure at least a 66% response rate to decrease the chance of self-selection bias.

Limitations

The sampling frame is limited to the sampled list of federally qualified HMOs and analysis of data is limited to those HMOs that responded prior to the cut off date.

Data Analysis

The SYSTAT program was used to analyze data. The statistical analyses used to analyze the data was descriptive statistics, including frequencies, means and medians. The Pearson Chi-square test was used to evaluate the significant differences between the categorical variables. T-tests and Mann-Whitney U non-parametric tests were used to evaluate differences in means between continuous variables.

CHAPTER V

RESULTS

The study group was made up of 148 HMOs whose medical director or designate completed the questionnaires out of a total of 243 federally qualified HMOs in the initial sample. This is a 61% response rate. The medical directors were also asked to send a membership information brochure that included references to member instructions on obtaining emergency services. Twenty-three of the 148 medical directors (16%) sent information that included patient instructions concerning what to do in case of an emergency.

Of the 243 questionnaires, 148 (61%) were returned after three mailings. The study was terminated two weeks after the third mailing. The responses to the questionnaire were analyzed from two perspectives. First, all responses were analyzed together. Second, the responses were analyzed based on self reported for-profit versus non-profit status of the HMO. Eighty-five (57.4%) of the 148 responses were from for-profit HMOs and 63 (42.6%) of the 148 were from non-profit HMOs. Figure 1 depicts this information.

Demographic data from the responding HMO medical directors were addressed in several questionnaire items. The results are not necessarily reported in the order that the specific item appeared on the questionnaire.

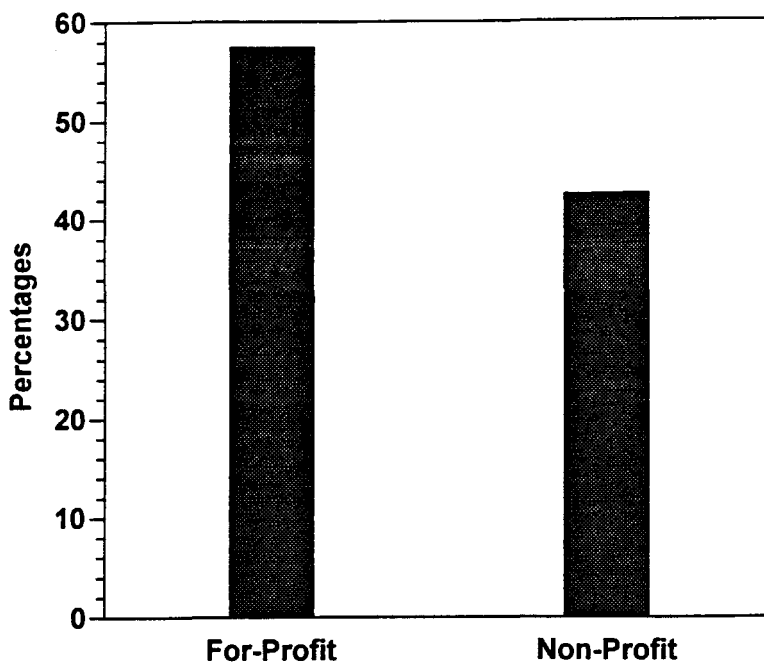


Figure 1. For-profit / non-profit status of the sample HMOs.

Item one asked the model type of the HMO. One of the sample HMOs did not respond to the question. Seventy-two (49%) of the 147 were Independent Practice Associations (IPA); 9 (6.1%) were staff model; 23 (15.7%) were group model; and 43 (29.1%) were "other". A space for comments was included. The "other" category was significantly large. Therefore, this group was analyzed further to determine if another model type should be added to the options. Four (9.3%) of the 43 that responded as "other" did not specify what model type they were. Thirteen (30%) of the 43 "other" specified they were network models. Twenty-six of the 43 (60%) specified they were mixed models. Further classification of the mixed models were: 7 (27%) of the 26 specified mixed with no further classification; 8 (31%) of the 26 mixed models specified they were a mix of IPA and staff

models; 1 (3.8%) specified they were a mix of staff and group models; 7 (27%) classified themselves as a mix of IPA and group models; 3 (11.5%) classified themselves as a mix of IPA, staff and group. Catlin, Bradbury, and Catlin (1983) defined "network" model HMO "as an HMO that contracts with two or more group practices to provide health services; the groups are usually compensated on a capitation basis" (p. 674). Based on this definition, all of the mixed models were reclassified as network models. Therefore, network models represent 39 (26.5%) of the 147 respondents.

Model types of for-profit and non-profit HMOs were also analyzed. The analysis of model types in the 84 for-profit HMOs were as follows: 41 (48.8%) of the 85 were IPA models; 1 (1.2%) was a staff model; 10 (11.9%) were group models; 30 (35.7%) were network; and 2 (2.4%) were classified as "other" with no further specification. One for-profit HMO did not respond to the question. The nonrespondent HMO was not counted in the above figures.

The analysis of model types in the 63 non-profit HMOs were as follows: 31 (49.2%) were IPA models; 8 (12.7%) were staff models; 13 (20.6%) were group models; 9 (14.3%) were network models; and 2 (3.2%) were "other" with no further specification. There was a highly significant difference in the breakdown of model types between for-profit and non-profit HMOs based on Pearson Chi-square test. $\chi^2 = 15.856$, (4)df, $p = .003$. The for-profit group had a higher percentage of network model HMOs than the non-profit group. The non-profit group exhibited a higher percentage of staff model HMOs than the for-profit group.

Figure 2 depicts the model types for the total sample population and the breakdown of for-profit and non-profit HMOs.

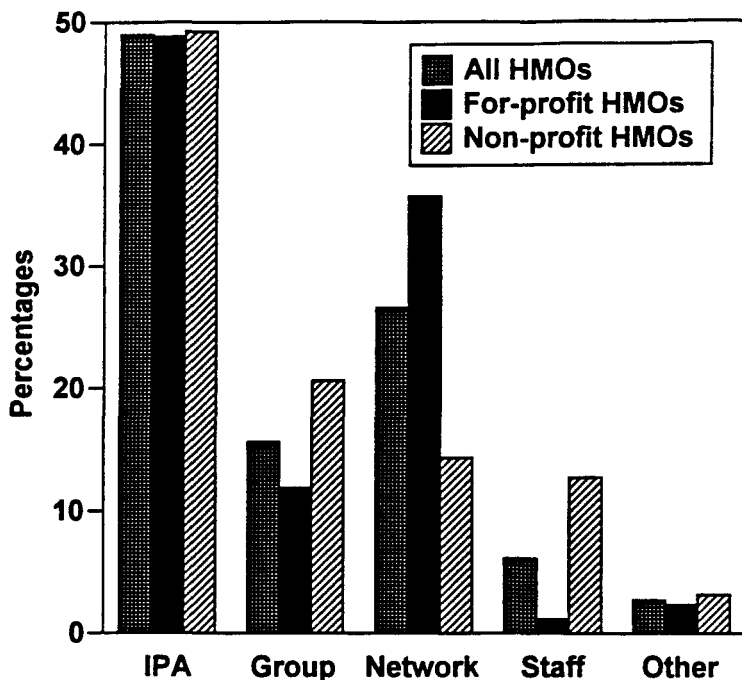


Figure 2. HMO model types.

Item four asked the medical directors to approximate the payor-mix (i.e., the percentage of the members whose care was financed by Medicare, Medicaid or other sources of payment). When all HMO respondents were included, the mean results for each were as follows: Medicare was 11.9%; Medicaid was 10.2%; and other was 87.9%. For-profit groups reported a mean of 11.1% Medicare, 7.6% Medicaid and 91.8% other. The non-profit group reported a mean of 13% Medicare, 11.7% Medicaid and 82.5% other. There was no statistically significant differences between for-

profit and non-profit groups. Figure 3 depicts the breakdown of the payor-mix of all the sample HMOs.

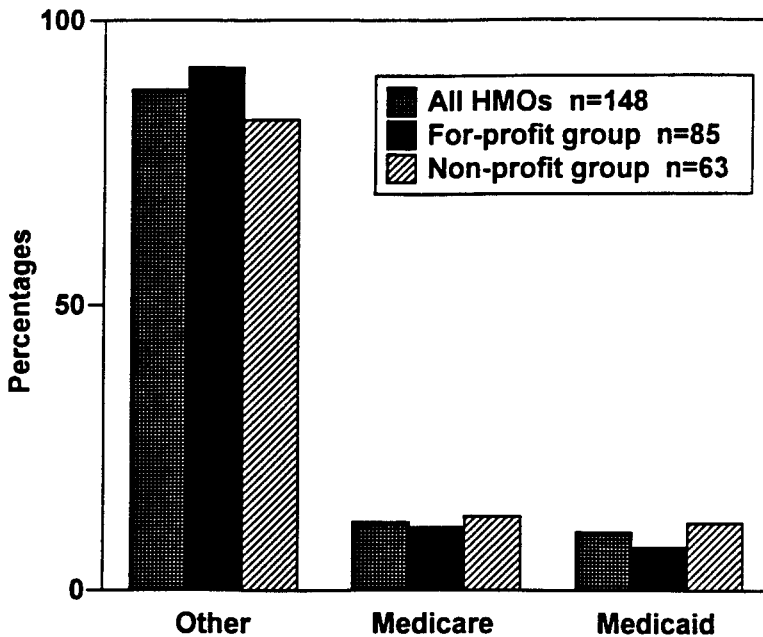


Figure 3. Mean payor-mix of sample HMOs.

Item five asked respondents to describe the type of geographic population the HMO primarily served. The categories were urban, rural and mixed (urban and rural). In the entire sample of 148 HMOs, 56 (37.8%) were urban; 6 (4.1%) were rural and 86 (58.1%) were mixed. Among the for-profit group, 37 (43.5%) were urban; 2 (2.4%) were rural; and 46 (54.1%) were mixed. Among the non-profit group, 19 (30.2%) were urban; 4 (6.3%) were rural; and 40 (63.5%) were mixed. These data are displayed in Figure 4. No significant differences were noted between for-profit and non-profit groups based on Pearson Chi-square.

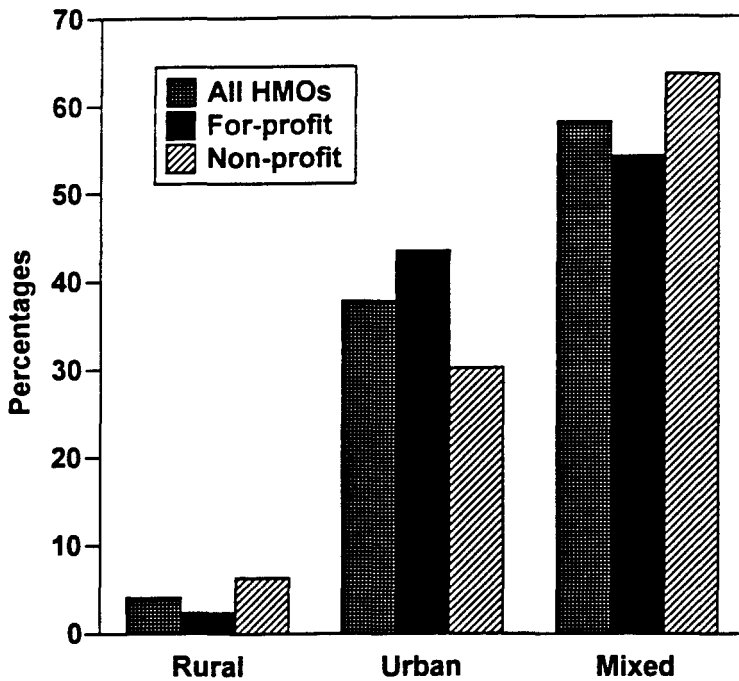


Figure 4. HMO geographic population types.

Item six assessed the availability of paramedic services in the community and how these services are financially supported. When all 148 of the respondents were analyzed as a group, 113 (76.4%) had tax supported paramedic services; 107 (72.3%) private paramedic services; and 4 (2.7%) had no paramedic services available. Some of the respondents indicated a mixture of tax supported and private support of paramedic services.

Among the 85 for-profit groups, 27 of the 85 (31.8%) were tax supported only; 20 (23.5%) were private only; and 37 (43.5%) were a combination of tax supported and private paramedic services. There were no communities in the for-profit category that reported not having paramedic services available. One for-profit HMO did not respond.

Paramedic services available to non-profit HMO enrollees were also analyzed. Among the 63 non-profit groups, 12 of the 63 (19.1%) were tax supported only; 13 (20.6%) were private only; and 34 (54%) were a combination of tax supported and private paramedic services. Three (4.6%) of the 63 non-profit HMOs reported a combination of tax supported, private, but had no paramedic services available in rural areas. One (1.56%) reported no paramedic services were available at all. No significant differences in paramedic services existed when for-profit and non-profit groups were compared using the Pearson Chi-square statistic. The results are displayed in Figure 5.

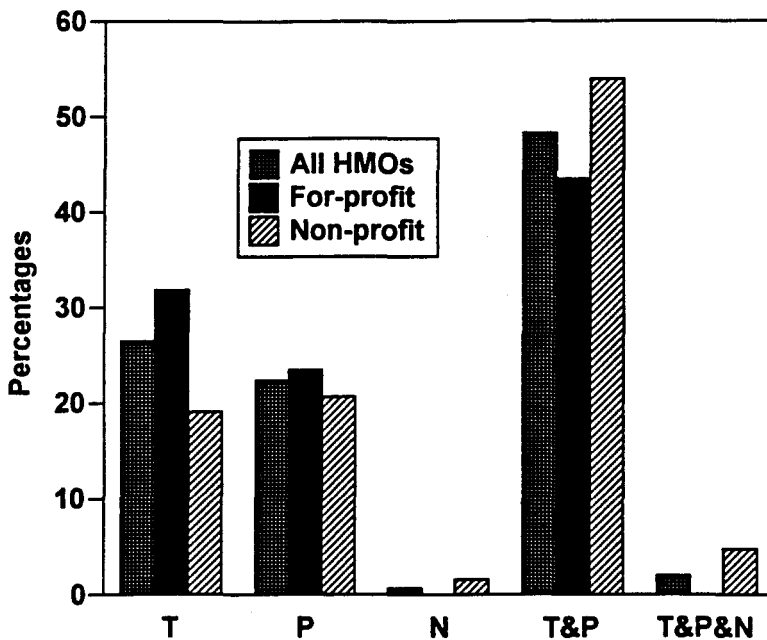


Figure 5. Types of paramedic services available.
T=tax supported; P=private; N=no services

Item seven addressed the existence of one emergency telephone number, such as 911, in the community. When responses from all 148 HMOs were analyzed the results were, 144 (97.3%) out of 148 responded that a designated emergency telephone number existed, only 4 (2.7%) replied "no" to the question. No significant differences existed when responses from for-profit and non-profit HMOs were compared.

Item eight asked if ambulance transportation to emergency departments was a covered benefit provided by the HMO. Of the 148 HMOs, 142 (96%) responded yes and 6 (4.1%) responded no. There were no significant differences in the responses when for-profit and non-profit groups were compared.

Item nine asked the medical director if the HMO owns or contracts with an ambulance service that is to be used by the HMO enrollees or if the enrollee has to procure their own ambulance service. When all 148 HMO respondents were analyzed together the results were as follows: 2 (1.4%) of 148 HMOs owned the ambulance; 81 (54.7%) of 148 contracted for ambulance services; and 70 (47.3%) of 148 indicated that the enrollee must procure private ambulance services when needed. Some of the respondents indicated more than one method of procuring ambulance services.

For-profit and non-profit HMOs were also compared on item nine. The for-profit groups responses were as follows: 48 (56.5%) of 85 HMOs contracted for the ambulance services only; 30 (35.3%) of 85 require members to procure private ambulance services; and 5 (5.88%) had a combined response of both HMO contracted and member procures own ambulance services. Non-

profit HMOs responded as follows: 2 (3.2%) of 63 owned their own ambulances; 26 (41.3%) of 63 contracted for the ambulance services; 33 (52.4%) of 63 required members to procure private ambulance services; and 2 (3.2%) of 63 had a combined response of both HMO contracts and member procures ambulance services when needed. The results are depicted in Figure 6.

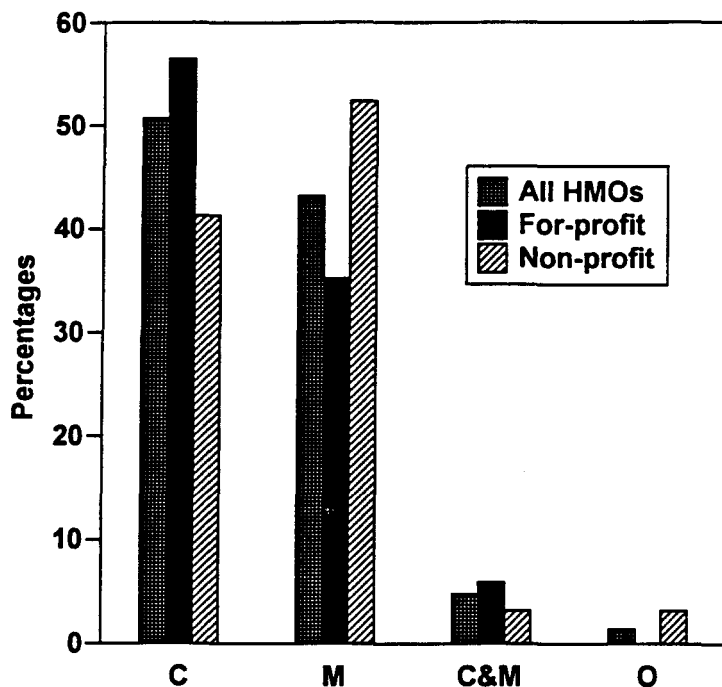


Figure 6. Procurement of ambulance services.
C=HMO contracts; M=member procures;
O=HMO owns

A greater percentage of for-profit groups contracted for the ambulance service than did non-profit HMOs. This finding was statistically significant based on Pearson Chi-square. $\chi^2 = 4.684$, (1)df, $p = .03$. The reverse was true for non-profit

groups in that a greater percentage required the members to procure private ambulance services than did for-profit groups, however this difference was not statistically significant based on Pearson Chi-square.

Table 1 depicts the breakdown of enrolled membership in the sample HMOs for the last quarter. When all 148 HMO respondents were compared, the median membership was 81,500. For-profit HMOs reported a median membership of 80,000 and non-profit HMOs reported a median membership of 84,000.

Table 1.--Enrolled membership in sample HMOs

Number of enrollees	Enrollees in for-	Enrollees in non-
	profit HMOs (% of study group) n = 83	profit HMOs (% of study group) n = 64
More than 100,001	33 (22.3)	23 (15.5)
50,001 - 100,000	23 (15.5)	19 (12.8)
25,001 - 50,000	22 (14.9)	8 (5.4)
10,001 - 25,000	5 (3.4)	3 (2.0)
10,000 or less	1 (.7)	7 (4.7)
No response	1 (.7)	3 (2.0)

Gatekeeping is the major focus of this study. Item 10 addressed gatekeeping, in reference to which emergency department (ED) enrollees were allowed to utilize. When responses of all 148 HMOs were analyzed together, the results were as follows: 71 (48%) of 148 responded that members could

utilize any ED in the region; 68 (46%) of 148 responded that members could utilize specified EDs in the region; and 9 (6.1%) of 148 responded that members could only utilize one specific emergency department.

For-profit and non-profit HMOs were also compared. The for-profit group responses were as follows: 36 (42.4%) of 85 responded that members could use any ED in the region; 45 (52.9%) of 85 responded that members could use specified EDs in the region; and 4 (4.7%) of 85 responded that members could only use one specific emergency department.

Among the non-profit group responses were as follows: 35 (55.6%) of 63 indicated that members could use any ED in the region; 23 (36.5%) of 63 indicated that members could use specified EDs in the region; and 5 (7.9%) of 63 indicated that members could only use one specific emergency department. Although there was a trend among for-profit groups to require members to use specified EDs in the region, when compared to non-profit HMOs, the differences were not statistically significant. Figure 7 depicts the results addressing which ED enrollees were allowed to utilize.

It was interesting to note that 14 (9.5%) of 148 respondents felt it necessary to write that the members could use any ED in the region for life-threatening emergencies only. Five (3.4%) of 148 respondents felt it necessary to write in that they preferred the members to utilize a specified ED in the region unless the situation was life-threatening.

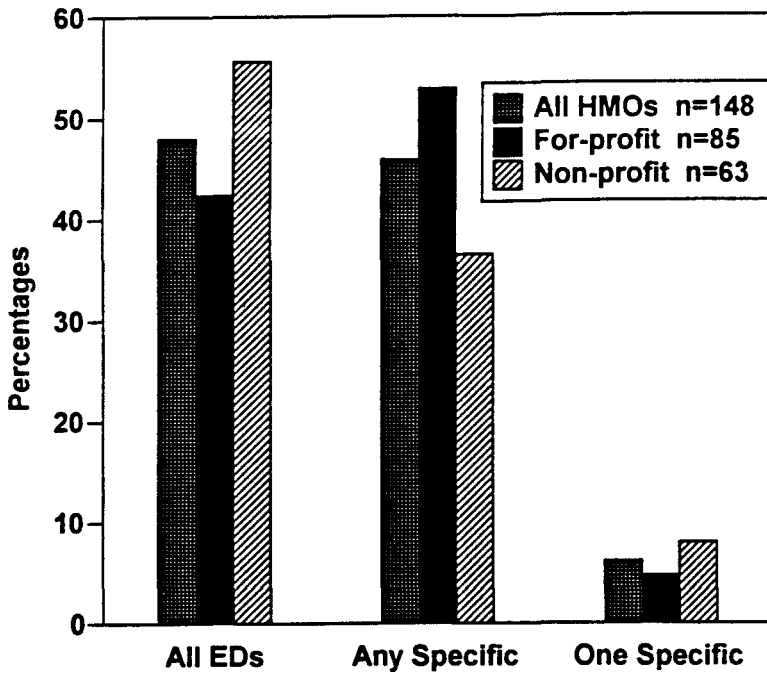


Figure 7. Emergency department utilization

Item 11 addressed emergency department access and prior approval, with distinction for in life-threatening versus nonlife-threatening situations and whether or not the member was within or outside the region. The item specified three different situations and asked the respondents to answer "yes" or "no" for each. When asked if the members could go to any ED without obtaining prior approval in a life-threatening situation within the region, 100% in all categories (for-profit and non-profit) responded yes.

Gatekeeping policies for nonlife-threatening conditions were more varied. When asked if the members could go to any ED without obtaining prior approval in a nonlife-threatening situation within the region, the following results were

obtained. When all 148 HMOs were analyzed together, 28 (19%) of 148 stated that enrollees could obtain ED services for non-life threatening conditions without prior approval.

Responses of for-profit and non-profit groups were also compared. It was found that 12 (14.1%) of the 85 for-profit groups allowed access to EDs without prior approval for non-urgent situations within the region. Among the non-profit groups, 16 (25.4%) of the 63 allowed access in similar situations. This was not a statistically significant difference. Therefore, there did not appear to be any significant differences in gatekeeping practices between for-profit and non-profit HMOs, in either life threatening and nonlife-threatening conditions for members within the region.

Geographic considerations were also explored. Respondents were asked if the enrollees could go to any ED without obtaining prior approval first when traveling outside of region. When all 148 HMOs respondents were analyzed together, 129 (87.2%) of the 148 responded that no prior approval was needed. Among the for-profit group, 71 (83.5%) of the 85 responded no approval was needed. Among the non-profit group, 58 (92.1%) of the 63 responded similarly. Some of the respondents to this portion of the questionnaire wrote in a clarification of in "life-threatening situations only" when traveling outside of region. Based on these data, there is no significant difference in the gatekeeping policies of the for-profit and non-profit HMOs in regard to use of ED services by enrollees when outside of the region. This analysis looked at each category (i.e., life-

threatening, nonlife-threatening, and outside region) as a separate item. The results are depicted in Figure 8.

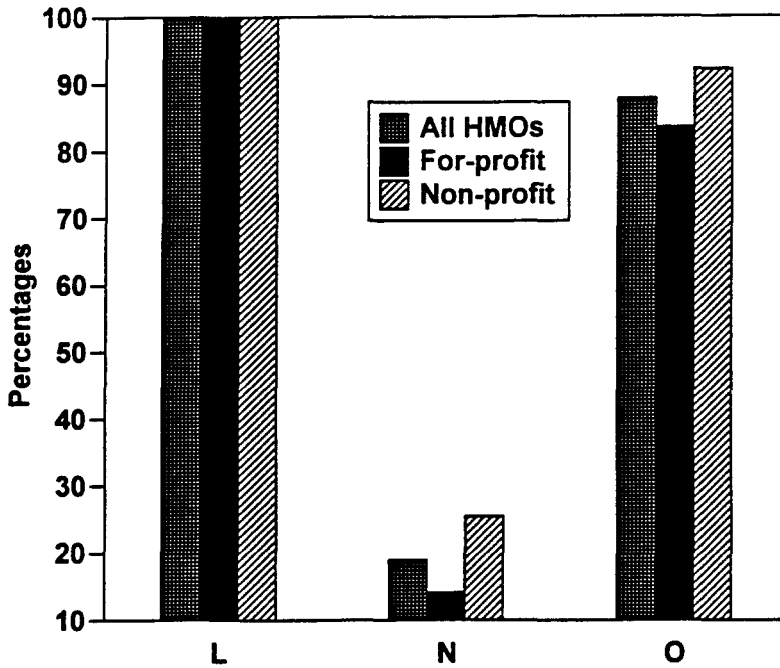


Figure 8. Emergency department utilization without prior approval. L=life-threatening in region; N=nonlife-threatening in region; O=outside region.

Item 11 was further analyzed with each category as part of the whole response to determine the combined percentage of those HMOs that practiced any form of gatekeeping. The combined responses were analyzed for the three categories (life-threatening situation within region only; life-threatening situation within region and when traveling outside region; and life-threatening within region, nonlife-threatening within region, and when traveling outside of region).

When all 148 sample HMOs were analyzed together, 19 (12.8%) responded that they allowed members to access the ED without prior approval in life-threatening situations only, 101 (68.2%) responded that no prior approval was needed in both life-threatening situations within region and when traveling outside region. Only 28 (18.9%) indicated that members could access the ED without obtaining prior approval in all three categories, (i.e., life-threatening and nonlife-threatening within region, and when traveling outside region). This response may be interpreted to mean that 18.9% of the sample HMOs did not practice any form of gatekeeping to limit access to emergency departments.

The for-profit and non-profit groups were analyzed using the same format. Among the for-profit groups, 14 (16.5%) of 85 allowed members to access the ED without prior approval in life-threatening situations within region only; 59 (69.4%) allowed members' access to ED without prior approval in both life-threatening situations within region and when outside of the region. Only 12 (14.1%) of 83 allowed members' access to the emergency department without prior approval in all three situations, (i.e., life-threatening within region, nonlife-threatening within region, and when outside of the region). This may be interpreted to mean that 14.1% of the for-profit HMOs did not practice any form of gatekeeping to limit access to emergency departments.

Among the non-profit groups, 5 (7.9%) allowed members to access the ED without prior approval in a life-threatening situation within region only; 42 (66.7%) allowed members to

access the ED without prior approval in life-threatening situations within region and when outside the region; and 16 (25.4%) allowed members' access to the emergency department without prior approval in all three categories, (i.e., life-threatening within region, nonlife-threatening within region, and when outside of the region. This result may be interpreted to mean that 25.4% of non-profit groups did not practice any form of gatekeeping to limit access to emergency departments. There was no statistically significant differences between for-profit and non-profit HMOs in regard to prior approval for ED use. The results of this analysis is depicted in Figure 9.

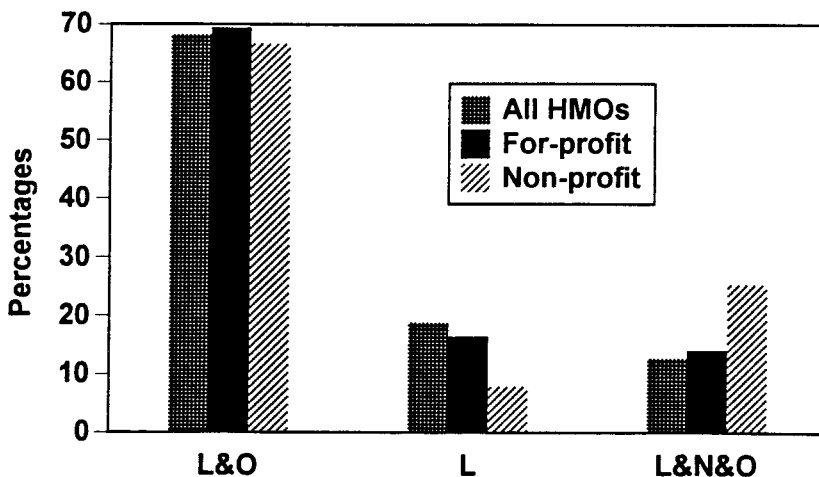


Figure 9. Combinations of emergency department utilization without prior approval situations.
L=life-threatening in region; N=nonlife-threatening in region; O=outside of region

Therefore, in response to the first research question regarding the practice of gatekeeping, 120 (81.1%) of the 148 HMOs indicated that they did practice some degree of gatekeeping

to control access to emergency departments in certain situations. In contrast, 28 (18.9%) of the 148 HMOs reported that they did not practice any form of gatekeeping to limit access to the emergency departments.

The second research question addressed the existence of a consistent HMO-wide definition of "life-threatening" emergency medical condition. It is possible that even though the HMOs practice gatekeeping based on emergency status, the criteria for gatekeeping (i.e., life-threatening) may not be defined consistently. Item 16A asked if the HMO made a distinction between life-threatening and other emergencies in their emergency department prior approval policy. One-hundred and nine (79.6%) of 137 HMO respondents answered that they did make a distinction, while 28 (20.4%) responded that no distinction was made.

Responses of for-profit and non-profit groups were also compared. Among the for-profit groups 68 (86.1%) of 79 responded affirmatively, while 11 (13.9%) responded negatively. Among the non-profit groups, 41 (70.69%) of 58 responded that they made a distinction, while 17 (29.3%) responded that they did not. A statistically significant difference was noted between for-profit and non-profit HMOs based on Pearson chi-square. $\chi^2 = 4.5427$, (1)df, $p = .03$. A higher percentage of for-profit HMOs distinguish between life-threatening and other emergencies than did non-profit groups.

In item 16B, if the response to item 16A was yes, the respondents were asked to describe how the prior approval policy was promulgated. The methods included membership identification

cards, membership brochure, posted at HMO locations, and other. Respondents could check more than one method. One-hundred and nine respondents from both for-profit and non-profit groups answered this item.

When the category "other" was selected, the medical directors were asked to specify. It was interesting to note that thirteen (54.2%) of the 24 that indicated "other" wrote in "membership newsletter" as the "other" method of promulgating the prior approval policy and making the distinction between life-threatening and other emergencies. Although "membership newsletter" represented the majority of the "other" category; it was not made into a separate category.

Therefore, the majority (79.3%) of the respondent HMOs distinguished between life-threatening and other emergencies in their emergency department prior approval policy and promulgated this information to the HMO members in a variety of ways. There was no statistically significant differences between for-profit and non-profit HMOs.

It can be seen, in Table 2, that brochures only and a combination of brochures and member identification cards are the methods most frequently used to promulgate the prior approval policy. It would appear that written communication is the method most relied on to promulgate the prior approval policy to HMO members. Only five of the respondents indicated verbal means of communicating the policies in the "other" category. The verbal communication methods included telephone calls, membership orientation via marketing seminars, and on-site visits to the centers by new members.

Table 2.--Methods of promulgating prior approval policies

Methods	For-profit HMOs (%)	Non-profit HMOs (%)	Total (%)
Brochure only	31 (46%)	23 (56%)	54 (50%)
Brochure & ID card	14 (21%)	7 (17%)	21 (19%)
Brochure & other	5 (7%)	8 (20%)	13 (12%)
Brochure & posted	4 (6%)	0	4 (3.6%)
ID card only	0	1 (2.4%)	1 (.9%)
ID card, brochure & other	7 (10%)	1 (2.4%)	8 (7.3%)
ID card, brochure & posted	4 (6%)	1 (2.4%)	5 (4.6%)
Other only	2 (3%)	0	2 (1.8%)
ID card, brochure, posted, & other	1 (1.5%)	0	1 (.9%)
Total	68	41	109

Research question three addressed the type of triage system used by the respondent HMOs. Item 12 asked the medical directors if the HMO required prior approval for the ED via a telephone triage system and to specify which type of personnel provided telephone triage and could authorize prior approval. The respondents were instructed to check all personnel that applied. Of the total 148 sample HMOs, 107 (72.3%) reported utilizing a prior approval telephone triage system.

Thirteen (12%) of the 107 respondents allowed licensed practical nurses to provide telephone triage and authorize prior approval. Five (3.4%) of the 107 respondents allowed non-

medical administrative staff to provide telephone triage and 1 (.9%) of the 107 respondents allowed non-medical clerical staff to provide telephone triage. Overall, the top three personnel utilized by all respondents, both for-profit and non-profit, were primary care physicians, on-call physicians and registered nurses, in descending order. Figure 10 depicts the breakdown of the types of personnel who provide telephone triage and authorize prior approval.

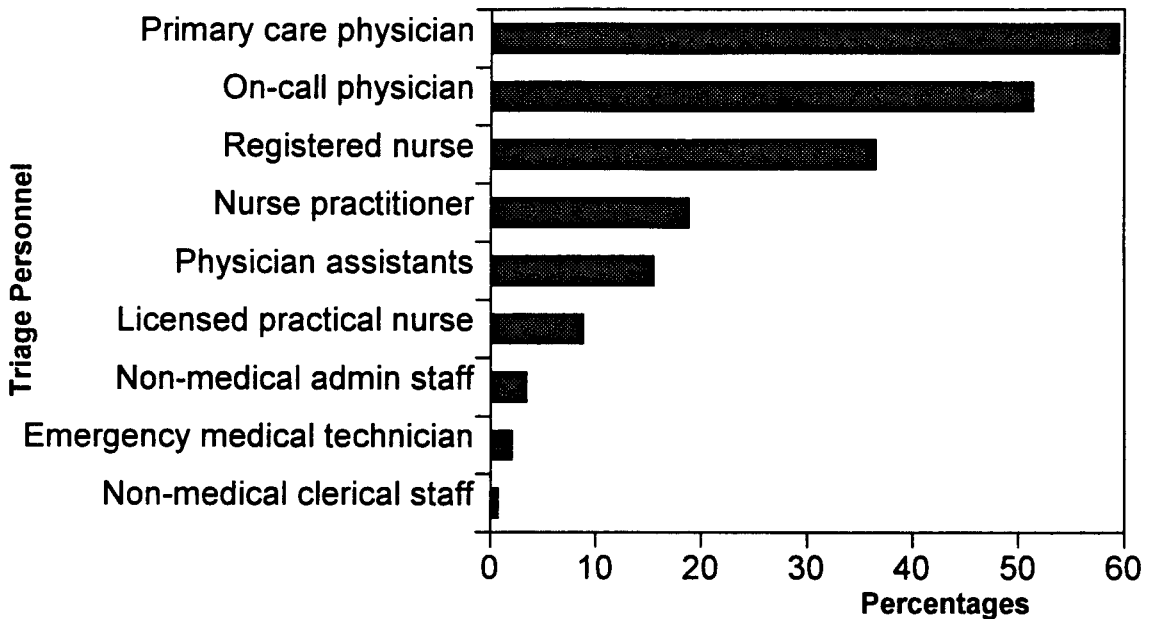


Figure 10. Telephone triage personnel (N=107).

Another important research question is the impact of gatekeeping for emergency department services on the health status of the HMO members. Item 13 asked the medical directors if, in their opinion, the triage system used to screen potential ED users facilitated quicker access to ED; caused minimal

delays, but no harm to clients' health; or caused undue delay.

One-hundred and seven medical directors responded to this item. When all 107 HMO responses were analyzed together, 21 (19.6%) of 107 responded that it facilitated quicker access; 82 (76.6%) felt it caused minimal delays, but no harm to clients' health; and 4 (3.7%) felt it caused undue delay. Of the 85 for-profit HMOs, 65 (76.5%) responded to the question. The results were as follows: 11 (16.9%) of 65 felt it facilitated quicker access to the ED; 52 (80%) felt it caused minimal delays, but no harm to clients' health; and 2 (3.1%) responded it caused undue delay. Of the 63 non-profit HMOs, 42 (66.7%) responded to the item. The results were as follows: 10 (23.8%) of 42 felt it facilitated quicker access to the ED; 30 (71.4%) felt it caused minimal delays, but no harm to clients' health; and 2 (4.8%) felt it caused undue delay. Figure 11 summarizes these findings.

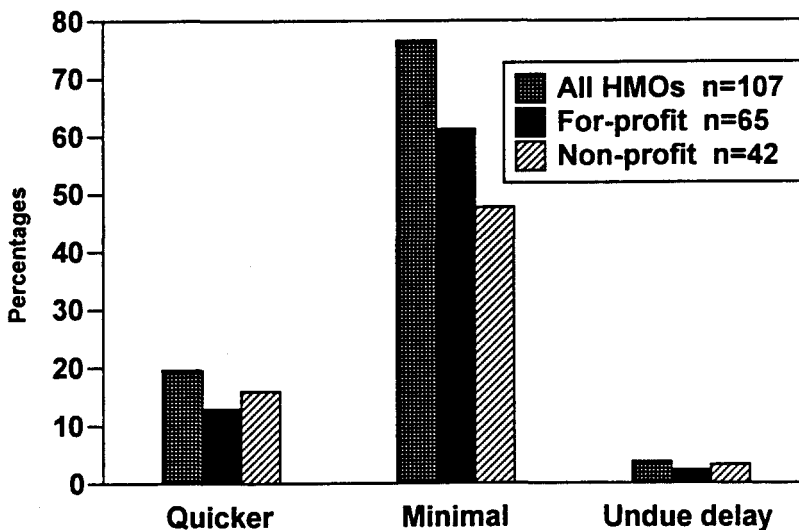


Figure 11. Impact of gate-keeping to control access to emergency department services.

Therefore, few medical director respondents expressed concern that undue delay was caused by telephone triage gatekeeping systems within their organization. There were no significant differences in the opinions of the for-profit and non-profit medical directors.

Item 14 asks the medical directors if in their opinion, the HMO members understand the ED prior approval policy and use it appropriately. Twenty (13.5%) of the medical directors did not respond to this item. When all 128 responses were analyzed together, 80 (62.5%) of 128 felt the members usually understood the policy; 45 (35.2%) felt members sometimes understood the policy; and 3 (2.3%) felt the members rarely understood the policy. The patterns between for-profit and non-profit HMOs were strikingly similar and no statistically significant difference existed between the subjective views of the for-profit and non-profit medical directors. The results are depicted in Figure 12.

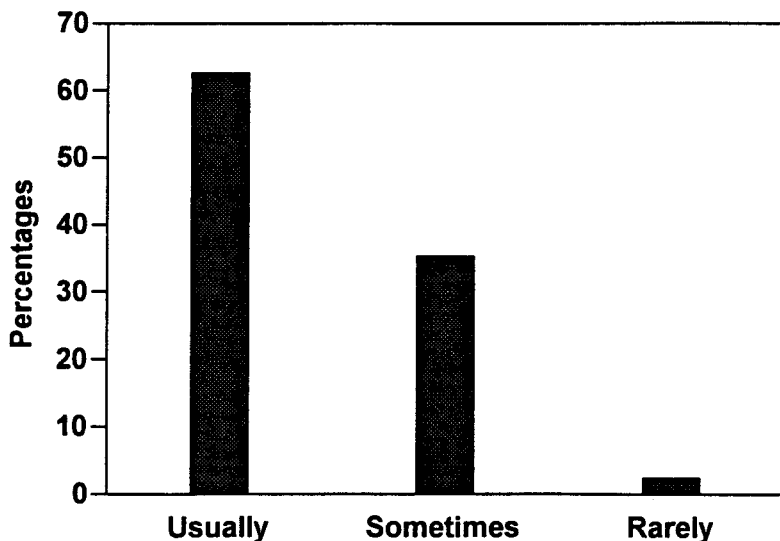


Figure 12. Members' understanding of prior approval policy.

Item 15 asked specific questions about the policy related to payment of ED expenses incurred by HMO members. There were four categories of responses to this item. These categories were, all ED expenses reimbursed without review; ED reimbursed only if prior approval obtained; review process if no prior approval obtained-may or may not reimburse; and no ED reimbursements. The categories were not mutually exclusive. A total of five HMOs; three for-profit and two non-profit; did not respond to the item.

When the category, "all ED expenses reimbursed without review" was analyzed, 3 (3.7%) of the 82 for-profit HMOs and 11 (18%) of the 61 non-profit HMOs selected this category. This indicates a significant difference between for-profit and non-profit groups based on Pearson Chi-square results. When the category, "ED expenses reimbursed only if prior approval obtained" was analyzed, 24 (29%) of the 82 for-profit groups and 16 (26.2%) of the 61 non-profit groups selected this category. There was no statistically significant difference between for-profit and non-profit groups. When the category, "review process if no prior approval obtained ED expenses may or may not be reimbursed" was analyzed, 76 (93%) of the 82 for-profit groups and 50 (82%) of the 61 non-profit groups selected this response. No respondents checked the category "no ED reimbursement". The results indicate that a higher percentage of for-profit groups have a retrospective review process when prior approval is not obtained, however, this finding was not statistically significant. Table 3 summarizes the results.

Table 3.--Payment of emergency department expenses

Payment Categories	For-profit HMOs (%)	Non-profit HMOs (%)	Total (%)
All expenses paid without review	3 (4%)	11 (18%)	14 (10)*
Paid only with prior approval	24 (29%)	16 (26%)	40 (28)
Review if no prior approval	76 (93%)	50 (82%)	126 (88)
Total	82	61	143
* $\chi^2 = 8.199$, (1)df, $p=.004$			

Item 17 asked if the HMO had a method of regularly reviewing ED utilization for appropriateness. When all 148 HMOs were analyzed, 132 (92.3%) responded that a method of regularly reviewing appropriateness of ED visits was in place. For-profit and non-profit groups were analyzed for this item also. Among the for-profit groups, 78 (91.8%) of 85 responded that they had a review system in place. Among the non-profit groups, 54 (85.7%) indicated that they had a method in place to regularly review appropriateness of ED visits. A slightly higher percentage of for-profit groups indicated having a method of regularly reviewing appropriateness of ED utilization than did non-profit groups, however, it is not statistically significant.

Item 18A asked if the HMO center was physically located within an HMO affiliated hospital with an ED. When all 148 HMOs responses were analyzed together, 26 (18.3%) of 148 responded that the center was physically located within a hospital. Among

the for-profit groups, 16 (18.8%) of 85 indicated they were located within a hospital. Among the non-profit groups, 10 (15.9%) of 63 indicated they were located within a hospital. There was no statistically significant difference observed between for-profit and non-profit groups.

Item 18B asked the medical directors to approximate the distance of the HMO center from the closest HMO affiliated hospital with an ED. The average distance when all sample HMOs were analyzed together was 3.5 miles. There were no differences in distance between the for-profit and non-profit groups.

Item 18C asked the medical directors to approximate the distance of the HMO center from the closest non-affiliated hospital with an ED. The median distance when all sample HMOs were analyzed was five miles. There were no differences in distance between the for-profit and non-profit groups.

In summary, the statistically significant differences observed between for-profit and non-profit groups were observed in response to item one addressing model types; item nine concerning procurement of HMO contracted ambulance services; item 15 concerning reimbursement of all ED expenses; and item 16A concerning distinctions made between life-threatening and other emergencies in the ED prior approval policy.

A slight, but statistically insignificant difference was noted in the responses to item nine concerning procurement of ambulance services by members; item 10 addressing gatekeeping in reference to which ED enrollees were allowed to utilize; item 11B which addressed the issue of members being allowed to go to any ED without obtaining prior approval first in a nonlife-

threatening situation within the region; item 15 addressing reimbursement of ED expenses via a retrospective review process; and item 17 in which the medical directors were asked if a method of regularly reviewing ED utilization for appropriateness was used by the HMO.

In determining the extent to which gatekeeping to limit access to emergency departments was practiced, 107 (72.3%) of the 148 sample HMOs responded that some form of gatekeeping via a prior approval telephone triage system was practiced. Twenty-eight (18.9%) of the 148 sample HMOs did not gatekeep to limit access to emergency departments. However, two of the respondents indicated that they were contemplating instituting a prior approval gatekeeping policy.

Content analysis of brochures

The 23 membership brochures were analyzed for the following variables: The use of the terms "life-threatening" or "emergency" in reference to a medically necessary condition warranting use of the emergency department; definitions of "life-threatening" or "emergency"; examples of life-threatening or emergency medical conditions; examples of nonlife-threatening conditions; and instructions on obtaining emergency services (e.g., call 911 or community emergency number, call for an ambulance, call primary care physician or 24-hour number first, go to nearest emergency department first).

Fourteen (61%) of the 23 brochures used the term "life-threatening" and eight (35%) used the term "emergency" in reference to medical conditions requiring emergency department utilization. Three (13%) of the 23 brochures gave definitions

of "life-threatening" medical conditions and thirteen (57%) gave definitions of "emergency" medical conditions.

Examples of emergency and life-threatening medical conditions were included in 13 (57%) of the 23 brochures. Examples of nonlife-threatening medical conditions were included in nine (39%) of the 23 brochures. Seven (30.4%) of the brochures did not offer examples of life-threatening or nonlife-threatening medical conditions.

Because of the small number of HMO membership brochures returned, they were not analyzed on the for-profit and non-profit bases. Therefore, no statistically significant differences can be noted in the members' instructions on obtaining emergency services between the for-profit and non-profit HMO membership brochures.

The definitions of emergency given in the membership brochures were similar to those given by the Health Care Financing Administration (HCFA) and the Deficit Reduction Act of 1984. A synopsis of the definitions of "emergency" given in the membership brochures is the sudden, unexpected, unforeseen, onset of an acute illness, condition, situation or accidental injury requiring immediate medical or surgical treatment (or as soon thereafter as the care can be available but in any case not later than 24 hours after the onset) to prevent the death of the member, loss of a limb, serious impairment to bodily functions or serious dysfunction of any bodily organ or part.

Examples, taken from the sample membership brochures, of life-threatening and nonlife-threatening conditions are listed in Table 4.

Table 4.--Examples of life-threatening and nonlife-threatening conditions from membership brochures.

Life-Threatening	Nonlife-Threatening
Heart attack	Common cold
Poisoning	Flu symptoms
Stroke	Sore throat
Severe chest pain	Ear infection
Severe abdominal pain	Strains
Severe allergic reaction	Sprains
Severe shortness of breath	Rash
Compound fracture	High fever
Convulsion / seizure	Mild burn
Uncontrollable bleeding	Urinary tract infection
Overdose of medication	Vomiting / diarrhea
Severe burns	Minor cut

The brochures were also analyzed to see if specific patient instructions regarding what action to take in case of an emergency were included. Five (22%) of the 23 brochures instructed members to call 911 in an emergency situation; 7 (30%) of the 23 instructed members to call the primary care physician; and 10 (43%) of the 23 instructed members to go to the nearest emergency department. One (4.3%) of the 23 did not specify what action the member was to take in an emergency

situation. Only one (4.3%) of the 23 did not have 911 or an emergency number available in the community.

Prior approval is a main focus of this study. Five (22%) of the 23 brochures did not indicate that prior approval was required to use the emergency department. However, these membership brochures included warnings that the emergency department expenses would not be covered if the condition was not considered a medical emergency upon retrospective review.

Of the 23 respondents that sent brochures, 11 (48%) felt the members usually understood the emergency department prior approval policy and used it appropriately, while nine (39%) felt the members sometimes understood the policy and use it appropriately.

CHAPTER VI

DISCUSSION

Gatekeeping

As far as can be determined on this anonymous questionnaire, all respondents were medical directors of HMOs. Evidence to support this assumption is that several physician respondents sent letters requesting abstracts, while no correspondence was received from non-medical personnel. However, no item was included on the questionnaire to verify the job title of the respondents.

The first research question was to determine the prevalence of gatekeeping in a national sample of federally qualified HMOs. Craig (1990) identified three basic forms of gatekeeping. One form is a retrospective review of ED visits and potential denial of benefits for visits determined to be medically unnecessary. Two prospective forms are prior approval with authorization to access ED services and the practice of allowing members to use specified EDs. Several items on the questionnaire addressed the different forms of gatekeeping. Gatekeeping to control access to emergency department services by members via a prior approval policy (item 11), was observed in 81.1% of the HMOs surveyed. Only 18.9% of the medical directors reported that they did not practice any form of gatekeeping to limit access to the emergency departments. There was no statistically significant

differences between for-profit and non-profit HMOs in regard to prior approval for ED use.

Item 10 addressed gatekeeping in terms of which emergency departments members were allowed to utilize. When the total sample of HMOs were analyzed together, 48% indicated that members could utilize any ED in the region; 46% indicated that members were to utilize specified EDs in the region; and 6.1% responded that members could only utilize one specific emergency department. Although there was a trend among for-profit groups to require members to use specified EDs in the region, when compared to non-profit HMOs, the differences were not statistically significant. However, it was interesting to note that 9.5% of the respondents wrote in that the members could use any ED in the region for life-threatening emergencies only and 3.4% wrote that they preferred the members to utilize a specified ED in the region unless the situation was life-threatening.

In the literature, critics of gatekeeping policies (Hossfeld & Ryan, 1989; Kerr, 1986, 1989) felt that members with potential life-threatening conditions were wasting valuable time by having to call for prior approval and by being directed to specific EDs when closer EDs were available. However, all of the respondents in the current study allowed members to go to any ED without obtaining prior approval first in life-threatening situations when the incident occurred within the region. Prior approval was needed only in nonlife-threatening situations within the region.

When geographic considerations were explored, the majority (87.2%) of the sample HMOs indicated that prior approval was not necessary when the member was traveling outside of the region. There was no statistically significant difference in the gatekeeping policies of the for-profit and non-profit HMOs in regard to use of ED services by members when outside of the region.

Item 15 addressed the issue of retrospective payment of ED expenses incurred by the HMO members. Four categories were presented, which included: all ED expenses reimbursed without review; ED expenses reimbursed only if prior approval obtained; review process if no prior approval obtained; and no ED reimbursements. A significantly greater percentage of non-profit HMOs (18%) indicated that all ED expenses were reimbursed without review than did for-profit HMOs (3.7%). There was no statistically significant difference between the for-profit HMOs' (29%) response and the non-profit HMOs' (26.2%) response to the category "ED expenses reimbursed only if prior approval obtained". Although a greater percentage of for-profit (93%) versus non-profit (82%) HMOs indicated they had a retrospective review process when prior approval was not obtained, this finding was not statistically significant. None of the respondents indicated the "no ED expenses reimbursed" category. In addition, the majority (92%) of the HMOs surveyed had a method of regularly reviewing ED utilization for appropriateness. The results of these review processes can be used as an indicator of how well the members understand the prior approval process.

Emergency Defined

The second research question addressed the consistency of the HMOs' definition of life-threatening emergency medical conditions. Items 16A and 16B of the questionnaire asked medical directors if a distinction between life-threatening and other emergencies were made in the HMOs' emergency department prior approval policy and if so, how was it promulgated to the members. The majority (79.6%) of the HMOs surveyed responded that they did make a distinction between life-threatening and other emergencies in the prior approval policy. A significantly higher percentage of for-profit HMOs distinguished between life-threatening and other emergencies than did non-profit HMOs.

Medical directors indicated that they used a variety of methods to promulgate the policy to members. The most frequently used methods were the membership brochures and the member identification cards.

In the literature, critics of the gatekeeping system have voiced concern over the lack of a clear definition of a life-threatening emergency. In 1989, Hossfeld and Ryan stated that only a minority of HMO membership brochures reviewed attempted to define an emergency or life-threatening medical condition. In addition, there is concern that the public lacks medical knowledge upon which to base decisions to seek ED care (Craig, 1990; Hossfeld & Ryan, 1989; Kerr, 1986). In order to discern if a consistent definition exists, medical directors of the sample were asked to send copies of the membership brochure that included references to client instructions on obtaining emergency care. Twenty-three (15.5%) of the HMOs complied with

the request. Each membership brochure was analyzed to see if they used the terms "life-threatening" and/or "emergency" in reference to a medical conditions requiring immediate action. The brochures were also analyzed to see if they provided a definition of life-threatening or emergency medical condition. The majority of the brochures used the term life-threatening or emergency in reference to medical conditions requiring ED utilization. In 70% of the brochures the definitions of life-threatening and emergency were similar, leading to the conclusion that those terms are used interchangeably in membership brochures. It should be noted that the definitions of life-threatening emergency medical conditions in the membership brochures were markedly similar to the definitions given by the Health Care Financing Administration (HCFA) and the Deficit Reduction Act of 1984.

The brochures were also analyzed to determine if they provided the HMO member with examples of life-threatening emergency medical conditions and nonlife-threatening medical conditions. Thirteen (57%) of the brochures included similar examples of life-threatening emergency medical conditions. Nine (39%) of the brochures contained similar examples of nonlife-threatening conditions. It appeared that brochures giving examples of life-threatening versus nonlife-threatening medical situations could enhance members' understanding and help them make more informed decisions. However, 30% of the brochures reviewed had no examples of life-threatening or nonlife-threatening medical conditions, which is an easily correctable situation.

Telephone Triage System

The third research question addressed the type of triage system used by the HMOs to authorize prior approval for ED use. The majority (72.3%) of the HMOs required prior approval for the ED. All of these used a telephone triage system. In the literature, (Craig, 1990; Kerr, 1989) express concern about the use of non-physicians to provide telephone triage. The telephone triage system used by the HMOs in this study were staffed predominantly by primary care physicians, on-call physicians, and registered nurses. However, four respondents admitted to using non-medical administrative and clerical staff for telephone triage and prior approval for ED use.

In recent literature, studies (Buckles & Carew-McColl, 1991; Evans et al., 1993; Poole et al., 1993) have indicated that with both standardized protocols and well trained telephone triage personnel, such as registered nurses, patients can receive accurate medical advice which includes being directed to the appropriate level of medical care to meet the patients' health care needs. There is nothing in the literature that supports the use of non-medical administrative and clerical staff for the telephone triage to ED role.

The majority (62.5%) of the medical directors felt the patients usually understood the prior approval policy and used it appropriately. However, 35% of the medical directors felt that, in their opinion, the patients sometimes understood the policy. It should be noted that this study did not query any members about their opinions of the gatekeeping policies or their understanding of the policies.

Impact on Members' Health Status

The fourth research question addressed the perceived impact of gatekeeping on the health status of HMO members. The majority (76.6%) of the medical directors felt, in their opinion, that the telephone triage system caused minimal delays, but no harm to members' health. A significant number (19.6%) felt the telephone triage system actually facilitated quicker access to EDs. Only four (3.7%) of the medical directors felt the triage system caused undue delay. This is in contrast to the study by Kerr (1989) that provided anecdotal information on excessive delay and possible harm to HMO members due to the ED access system.

The geographic population served by the HMO was described. Only 4.1% of the HMO centers were located in rural areas, while 37.8% were in urban areas, and 58.1% were in mixed rural and urban areas. There was no significant difference between the locations of for-profit and non-profit HMO centers. It should be noted that the average distance of the HMO facility from the affiliated hospital was 3.5 miles and from non-affiliated hospitals the average distance was 5 miles.

In analysis of the data concerning the distance of the closest HMO-affiliated hospital versus the closest non-affiliated hospital, the median distance for all of the sample HMOs was less for the affiliated than for the non-affiliated hospital. These results appear to dispel concerns voiced by critics of gatekeeping systems that members are directed to bypass closer hospitals in attempts to have the members treated at HMO-affiliated hospitals. However, it is not known from this

data if there was a closer hospital for each individual member. In addition, no data was gathered on the size of the catchment area of the HMO nor the distance individual members might have to travel in an emergency situation.

For-profit/Non-profit Status

The fifth research question was related to differences in practices based on the for-profit/non-profit status of the HMO. Catlin et al., (1983) stated that one of the factors influencing HMOs' policies and procedures is the for-profit/non-profit orientation of the company. In regards to the research question concerning gatekeeping, the only statistically significant difference between for-profit and non-profit HMOs was observed in the item addressing the payment of ED expenses incurred by the HMO member. A higher percentage of non-profit HMOs reimbursed all ED expenses without review than did for-profit HMOs. No other statistically significant differences were noted in the remaining responses addressing the research questions including; gatekeeping policies, type of triage system utilized by the HMOs or in the impact of gatekeeping on the health status of the members.

Item 16A asked the medical director if the HMO made a distinction between life-threatening and other emergencies in their emergency department prior approval policy. However, the item did not ask for a specific definition of the terms. A greater percentage of for-profit HMOs claimed to distinguish between life-threatening and other emergencies than did non-profit. This difference was statistically significant.

In summary, statistically significant differences observed between for-profit and non-profit HMOs were found in two other areas. For-profit HMOs had a higher percentage of network model HMOs than the non-profit group. A greater percentage of for-profit HMOs contracted for the ambulance services used by members than did non-profit HMOs.

Trends were noted in responses to several items, however the differences were not statistically significant. A higher percentage of non-profit HMOs required members to procure private ambulance services than did for-profit HMOs. A higher percentage of for-profit HMOs required members to use specified EDs in the region versus non-profit HMOs. In response to item 11 regarding members ability to utilize any ED without prior approval in a nonlife-threatening situation within the region, a higher percentage of non-profit HMOs responded affirmatively than did for-profit HMOs. A higher percentage of for-profit than non-profit HMOs indicated having a retrospective review process for payment of ED expenses if no prior approval was obtained. Finally, a slightly higher percentage of for-profit HMOs indicated having a method of regularly reviewing ED utilization for appropriateness than did non-profit HMOs.

Other Findings

In 1989, Hossfeld and Ryan voiced concern that none of the HMOs studied instructed members to call 911 in an emergency situation. Only seven percent of the membership brochures reviewed recommended that 911 access be used. In the current study, 22% of the brochures instructed members to call 911 first in an emergency situation. However, the written questionnaire

utilized in the current study did not specifically address whether or not members were instructed to call 911. The questionnaire addressed only the existence of an emergency telephone number (such as 911) in the community. It was found that only four percent of the HMOs in the current study did not have an emergency telephone number (such as 911) available in the community. The prevalence of a uniform community emergency number may be reflective of the fact that most of the sample HMOs were located in urban or suburban areas which are more likely to have a 911 emergency number.

Item six assessed the availability of paramedic services in the community and how those services were financially supported. Both for-profit and non-profit HMOs reported a majority of combined tax supported and private paramedic services available in the community. Three non-profit HMOs reported having a combination of tax supported, private, and no paramedic services available in rural areas. Only one non-profit HMO responded that no paramedic services were available at all.

CHAPTER VII

RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the results of this study it can be concluded that gatekeeping access to emergency departments is a prevalent practice among HMOs; that a moderately consistent HMO-wide definition of emergency medical condition exists; and that the telephone triage system is the most common method used by HMOs to expedite the prior approval policy for HMO members. Also, in the opinion of the majority of the medical directors surveyed, gatekeeping access to emergency departments does not cause undue delay in obtaining ED services by their HMO members.

For future studies, careful rewording of some items will facilitate obtaining more specific information. For example, rewording of item 12 to include the option, "if prior approval is not required skip to item 15" would have facilitated quicker identification of the HMOs that practiced gatekeeping via a prior approval telephone triage system. Rewording of item 10 to ask which ED may your members utilize in an emergency situation, would have provided a more definite response to the item. As a result of the wording used, many of the respondents felt it necessary to qualify their response by writing "in a life-threatening situation only" on the questionnaire. A few respondents answering that specified EDs in the region were to be utilized by members, wrote in "preferred unless the condition

is life-threatening". This indicates that the item was not clear enough or specific enough to get a more definite response.

Future research should include studies of the HMO members' perception of the gatekeeping policies practiced by the HMOs in controlling access to emergency departments; HMO members' perception of what a life-threatening emergency is; the HMO members' opinion of the clarity of the instruction brochure and their understanding of the policy; the members' perception of the telephone triage system and how it facilitates access to EDs; and how far the member must travel to affiliated and non-affiliated emergency departments. It would also be interesting to note how long it takes the member to get there. Focus groups for members to evaluate brochures, with and without examples of life-threatening and nonlife-threatening conditions would help to determine whether or not they enhance the members' decision making skills regarding a life-threatening versus nonlife-threatening medical situation.

Studies of the telephone triage system in general should include: analysis of both HMO member and triage personnel satisfaction with the system; a retrospective analysis of the accuracy of the triage decisions made by the telephone triage personnel for adverse clinical outcomes; analysis of the effectiveness of training received by triage personnel; and analysis of the protocols followed by the triage personnel. It is important to determine, if standardized protocols exist; the scope of the protocol; and what level of personnel had input into the development of the protocol.

Finally, studies of the effect of financial incentives on the gatekeeping policies instituted by HMOs are imperative. Research which includes the ongoing evaluation and reassessment of the effects of HMO gatekeeping policies from a legal and ethical perspective are indicated.

APPENDIX A

QUESTIONNAIRE

1. What model type is your HMO? (Circle one)
A. IPA B. Staff C. Group D. Other
2. Are you a for-profit or non-profit organization? (Circle one)
A. Profit B. Non-profit
3. Approximately how many members were in your HMO in the last quarter?
(Fill in number) _____.
(If there is more than one of your HMO organizations, answer for your location and the region it serves only).
4. Approximately what percentage of your members are:
(Please fill in appropriate percentages for each).
A. Medicare _____ % B. Medicaid _____ % C. Other _____ %
5. Which population do you primarily serve? (Circle one)
A. Urban B. Rural C. Mixed
6. Are there paramedic services available in your community? (Circle all that apply)
A. Tax supported B. Private C. No service available
7. Is one emergency telephone number (such as 911) currently used in your community?
(Circle one)
A. Yes B. No
8. Is ambulance transportation to emergency departments provided as one of the benefits of belonging to your HMO? (Circle one)
A. Yes B. No
9. Does your HMO own or contract with an ambulance services for use by HMO clients?
(Circle one)
A. HMO owned ambulance
B. HMO contracts for ambulance
C. Member procures private ambulance

10. Which emergency department (ED) may your members utilize? (Circle one)
- Any ED in the region
 - Specified EDs in the region
 - One specific ED only
11. May your members go to any emergency department without obtaining prior approval first? (Circle yes or no for each option A, B, and C)
- In a life-threatening situation within region Yes / No
 - In a nonlife-threatening situation within region Yes / No
 - When traveling outside of region Yes / No
12. If your HMO requires prior approval for the ED via a telephone triage system, which type of personnel are authorized to provide telephone triage and authorize prior approval? (Circle all that apply)
- Primary care physician
 - On-call physician
 - Physician Assistant
 - Nurse Practitioner
 - Registered Nurse
 - Licensed Practical Nurse
 - Emergency medical technician
 - Non-medical administrative staff
 - Non-medical clerical staff
13. Do you feel that the triage system used to screen potential ED users? (Circle one:)
- Facilitates quicker access to ED
 - Causes minimal delays, but no harm to clients' health
 - Causes undue delay
14. Do the HMO members, in your opinion, understand the ED prior approval policy and use it appropriately? (Circle one)
- Always
 - Usually
 - Sometimes
 - Rarely
15. Will the ED expenses be reimbursed by the HMO? (Circle all that apply)
- All ED expenses reimbursed without review.
 - ED reimbursed only if prior approval obtained.
 - Review process if no prior approval obtained; may or may not reimburse
 - No ED reimbursements.
16. A. Does your HMO make a distinction between "life-threatening" and other emergencies in your emergency department prior approval policy? (Circle one)
- Yes
 - No. If no, go to question 17.

B. If Yes, how is this policy promulgated? (Circle all that apply)

- a. On member's ID card
- b. Membership brochure instructions
- c. Posted at HMO locations
- d. Other (Explain) _____

17. Does your HMO have a method of regularly reviewing ED utilization for appropriateness?

(Circle one)

A. Yes B. No

18. A. Is your HMO center physically located within an HMO affiliated hospital with an ED?

(Circle one)

a. Yes b. No

B. If No, approximately how many miles away is the closest HMO affiliated hospital with an ED?

(Please fill in milage) _____

C. How many miles away is the nearest non-affiliated hospital with an ED?

(Please fill in milage) _____

Thank you for your assistance.

RETURN QUESTIONNAIRE TO REGINA PHILLIPS, c/o Dr. Diana P. Hackbarth, SCHOOL OF NURSING, LOYOLA UNIVERSITY CHICAGO, 6525 N Sheridan Rd, Chicago, IL 60626.

APPENDIX B
COVER LETTER

January 1, 1994

Dear Medical Director:

I am a graduate student at Loyola University of Chicago, Marcella Niehoff School of Nursing. I am writing a thesis for completion of my master's degree. My area of interest is HMO policy on emergency department access.

The purpose of this study is threefold: (1) to determine if the Health Maintenance Organization (HMO) practice of "gatekeeping" to control access to emergency departments by HMO clients is a common practice; (2) to determine if a consistent HMO-wide definition of "life-threatening" emergency medical condition exists and (3) to delineate the emergency triage systems used by the HMOs. This is a replication of a study done by an emergency department physician to update the information on the gatekeeping practices of HMOs.

I have enclosed a short questionnaire describing your clients' access to emergency medical services in your community. The questionnaire should take approximately 10 to 15 minutes to complete. I am also requesting a copy of your membership brochure that includes reference to client instructions on obtaining emergency care. Please return the completed questionnaire and the membership brochure in the enclosed postage paid, self-addressed envelope. Each envelope is numbered to facilitate follow-up of non-respondent agencies.

To assure confidentiality, no names of individuals or organizations will appear on the questionnaire or any reports or publications resulting from this study. Results will be reported in the aggregate so no individual agency can be identified. No risks or discomforts are anticipated to be likely to occur as a result of your participation in this study. Your return of the completed questionnaire is evidence of informed consent to participate in this study. At your request, abstracts of the results of this study will be mailed to you.

If you have any questions about this study or need assistance completing the questionnaire, please call me at the following numbers: 312-375-6795 or 312-933-8753.

Thank you very much for your help.

Sincerely,

Regina C. Phillips, R.N., B.S.N.

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April 14, 1994
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