GUAM MEMORIAL MEDICAL CENTER

Volume 1

HEALTH PLAN FEASIBILITY STUDY

PREFACE TO THE PROJECT

In June of 1971, Daniel, Mann, Johnson, & Mendenhall was selected by the Board of Trustees of the Guam Memorial Hospital[1] as professional consultants to provide all planning, design, architectural, and engineering services leading to eventual construction of a modern new hospital facility.

The several tasks which must be undertaken to reach that point when the doors are opened to the public for the first time were delineated and negotiated during the remainder of 1971 and early 1972. In May of 1972, the agreement between Guam Memorial Hospital and Daniel, Mann, Johnson, & Mendenhall was completed, and work was started on the first phase of the project.

This current phase of work for the total project will culminate, in early 1973, in definitive schematic drawings, specifications, and cost estimates for the new hospital. In addition, it will have explored several peripheral areas of health planning relating in part to Guam Memorial Hospital and in part to the overall health care needs of the people of Guam.

During the course of the project, DMJM will be furnishing Guam Memorial Hospital with reports covering the several tasks being accomplished. These reports, bound as separate volumes, will consist of the following:

Volume 1 — HEALTH PLAN FEASIBILITY STUDY

A narrative analysis of the feasibility of establishing a comprehensive prepaid health care plan and accompanying physician group practice on Guam.

Volume 2 — MASTER PLAN REPORT

A report in four parts as follows:

Part 1 — Historical Background of the development of Guam Memorial Hospital from its beginning.

Part 2 — Future Needs of GMH in terms of facilities necessary to accommodate patient beds, ancillary services, and support facilities projected to the year 1990.

Part 3 — Long-Range Master Plan drawings showing recommended incremental facility development to accommodate the future needs. Will indicate those facility improvements required for first phase construction.

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[1] The name of the facility was changed from Guam Memorial Hospital to Guam Memorial Medical Center during the publishing of this report.

Part 4 – Cost Estimate projections of each construction phase, projected to include anticipated construction cost escalation.

Volume 3 – FUNCTIONAL PROGRAM

A narrative program of every room or space to be constructed in the first phase. The program describes the room, its function, its functional relationships, its occupancy load, its utility and equipment requirements, its finish materials, and any special requirements.

Volume 4 – FIRST-PHASE DEVELOPMENT PROJECT

Schematic drawings of those buildings to be constructed in the first phase. Includes architectural, structural, mechanical, electrical, and site drawings. Will include cost estimates of construction, Group I and II equipment, and time schedule.

Volume 5 – FINANCIAL MASTER PLAN

An analysis of the capital cost requirements and cash flow required to implement the first phase development. Will also delineate potential funding sources beyond Government of Guam General Fund.

The sum of these five volumes will provide the Board of Trustees of Guam Memorial Hospital the appropriate planning tools which will enable them to properly plan:

- The long-range growth of Guam Memorial Hospital facilities.
- The long-range role which Guam Memorial Hospital should fill in the health care delivery on Guam.
- The improvements which may be indicated as beneficial to this health care delivery.
- The economic considerations to Guam Memorial Hospital which result from an improved system of health care delivery.

PREFACE TO VOLUME I – HEALTH PLAN FEASIBILITY STUDY

Within the several tasks to be performed by Daniel, Mann, Johnson, & Mendenhall for the benefit of Guam Memorial Hospital lies the responsibility to assess the feasibility of establishing a comprehensive prepaid health care plan and a consequent physician group practice on Guam.

The overall concept of the health maintenance organization as a means of improving the quality of health care while reducing the cost of such care is subject to many interpretations approached from many viewpoints and producing many divergent recommendations. The concept nationally is still an experimental one; established Health Maintenance Organizations (HMOs) are few in number and serve different groups of people with varying degrees of success.

The HMO concept is not new to either the providers or the consumers of health care on Guam. Several attempts have been made in recent years to study some aspects of HMO feasibility on Guam, although no action has been officially undertaken to implement any of the studies.

Daniel, Mann, Johnson, & Mendenhall, realizing that a study of this sensitive nature would require its own professional services augmented by additional consultants, was gratified to obtain approval by the Board of Trustees of Guam Memorial Hospital of the firm of Cresap, McCormick and Paget Inc. With an impressive background involving consulting services to over 300 health care institutions or governmental health agencies during the last few years, DMJM felt that it would be best qualified to analyze the potential viability of an HMO as it might be implemented on Guam. In addition to its overall qualifications, DMJM strongly recommended Cresap, McCormick and Paget because of its demonstrated awareness of the uniqueness of Guam in terms of its territorial status, its quite recent autonomy following the passage of the Organic Act, and its developed delivery of health care as a function of the Government of Guam. It was readily apparent to DMJM that CMP would not, therefore, simply be trying to superimpose a U.S. mainland health delivery plan, however successful elsewhere, upon the Government and people of Guam.

The results of its study contained in this first volume report are ample proof that DMJM's faith in CMP has been well founded. This study explored the historical development of the role of the Government of Guam in health care delivery; it probed the attitudinal climate of the medical profession; and it examined the several vehicles currently in existence for delivering health care to the people of Guam.

Further, CMP did not begin its work with the implied bias of attempting to either prove or disprove the feasibility of a comprehensive health care delivery plan. The end product of this study, therefore, is the development of alternative plans of action upon which the Board of Trustees of Guam Memorial Hospital may deliberate to arrive at a realistic goal for improving their institution.

To reflect the uniqueness which is Guam is the format of this volume. No summary has been presented which would enable the casual reader to arrive at simplistic conclusions. This has been done intentionally, thereby encouraging a careful perusal of all parts of the study; so that the reader becomes fully aware of the ramifications of the alternatives which are presented in the final chapter.

Finally, it must be pointed out that this study is not an end in itself but hopefully a beginning. Whatever ultimate decision the Board of Trustees may make and whichever course of action they decide upon, much work remains ahead for the Board as well as the medical and professional communities. To this extent, Daniel, Mann, Johnson, & Mendenhall sincerely endorses the work of Cresap, McCormick and Paget contained herein and with equal sincerity encourages the Board of proceed with the steps necessary to achieve whichever goal they may choose.

DANIEL, MANN, JOHNSON, & MENDENHALL
Agana, Guam 1972

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We would like to express our appreciation for the cooperation, assistance, and encouragement we received from all of those with whom we worked in the course of this study. In particular, we would like to thank the following individuals and organizations as well as the many others without whose help this study would not have been possible:

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Guam Medical Society
Catholic Medical Center
Seventh Day Adventist Clinic
Guam Medical Clinic
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HEALTH CARE FEASIBILITY STUDY FOR GUAM MEMORIAL HOSPITAL

COMPREHENSIVE PREPAID HEALTH CARE AND PHYSICIAN GROUP PRACTICE ON GUAM

Table of Contents

CHAPTER I

INTRODUCTION

I - INTRODUCTION

This chapter presents the objective and scope of our study, describes the approach taken to the study and the methods of study employed, and outlines the organization of the remainder of this report.

OBJECTIVE AND SCOPE OF THE STUDY

The objective of this study has been to determine the feasibility and desirability of establishing a prepaid comprehensive health care system and group practice in Guam in the form of a "Health Maintenance Organization." This has been undertaken to assess whether the "Health Maintenance Organization" approach, in contrast to the existing health care delivery system in Guam would further the commitment of the Government of Guam in providing an adequate level of health care to the population of Guam in a manner that is most cost-effective for the Government, is most responsive to current identifiable national trends regarding the organization and financing of medical care, is appropriately responsive to the health care needs of Guam, and satisfies legal requirements of existing legislation.

In scope, this study is limited to an analysis of the relative advantages and disadvantages of a comprehensive prepaid health care system and physician group practice, development of organizational relationships necessary to implement such a plan, and marketing the plan to the population of Guam. It specifically excludes study of other kinds of alternatives to the existing health care system.

APPROACH TO THE STUDY

Five principal tasks were pursued in the study. These were:

- To analyze the present health care system of Guam including the characteristics of the population, patterns of health care, the various health programs on the Island, and the characteristics of physicians and other significant health manpower sources now providing health care.

- To analyze the current health insurance coverage available in Guam, the role of government in supporting health care, and the comprehensiveness of health coverage available to the non-military population.

- To conduct various attitudinal surveys to determine the overall acceptability of a prepaid medical plan to physicians and to various health organizations, leading to an assessment of the basic requirements and marketability of a prepaid health care plan.

- To assess the legal, organizational and community constraints which must be considered in determining the feasibility of developing a prepaid health care plan.

- To develop final recommendations, and alternatives, for a prepaid health care system in Guam consistent with the unique needs and characteristics of the Island and its population.

The first four tasks involved the gathering and analysis of related information and were therefore pursued simultaneously in preparation for the fifth task, that of making recommendations.

METHODS OF STUDY

Prior to the inception of this study, substantial work had already been performed by others concerning the analysis of the existing health care delivery system of Guam and demographic and related projections which will influence its future development. It was not our intention to duplicate these efforts, but rather to rely heavily throughout the course of the study on the knowledge and information already gathered by Daniel, Mann, Johnson & Mendenhall, (DMJM) and others on the Island of Guam. Therefore, we concentrated our efforts on the analysis of available data and consideration of alternative health systems which might realistically be developed on Guam.

Much of our work has taken the form of personal interviews necessary to give us a firsthand understanding of the current situation and anticipated future needs of Guam. In addition to members of agencies of the Government of Guam involved in the provision of health care services, we interviewed members of the Guam Medical Society, the Seventh Day Adventist Clinic, the Catholic Medical Center clinic, the U. S. Navy Hospital, and other representatives of health-related organizations and professional groups. More than 20 physicians and approximately 40 other individuals were interviewed, several more than once. The interviews were conducted on a confidential basis to encourage fair expression of personal points of view.

Throughout the study, particular attention was devoted to identifying those characteristics of the Guamanian population, governmental structure, health care system and economy which make Guam unique. This has been

particularly important to ensure that recommendations are responsive to the health care needs of Guam and that they are not the superimposition of approaches originally designed to meet the somewhat different needs of the 50 states.

ORGANIZATION OF THIS REPORT

The remainder of this report is divided into three chapters and an appendix, as follows:

II - The Current Health Care System - which describes the organization of the current health care system, the programs which it provides, existing health care facilities, the population served, medical manpower resources, and the financing of health care in Guam

III - Feasibility Of A Health Maintenance Organization - which describes the concept of a prepaid comprehensive health care system and physician group practice, discusses the feasibility of applying that concept on Guam

IV - Plan of Action - which proposes a plan of action for orderly decision-making by the Board of Guam Memorial Hospital

Appendix - which describes the ways and means by which a "Health Maintenance Organization" could be established on Guam, should such a course of action be chosen.

CHAPTER II

THE CURRENT HEALTH CARE SYSTEM

II - THE CURRENT HEALTH CARE SYSTEM

This chapter discusses the organization of the current health care system on Guam, the services which it provides, its health care facilities, the population served, the medical manpower resources available, and the financing of health care in the Territory.

Its purpose is to give the readers of this report background necessary to evaluate the appropriateness of the recommendations contained in the next chapter of this report. Therefore, it presents an overview of the current health care system and then discusses significant trends and characteristics related to the feasibility and desirability of establishing a comprehensive prepaid health care system and physician group practice on Guam. It specifically excludes a comprehensive documentation of the current health care system such as is already available in the three components of the Comprehensive Health Plan For The Territory Of Guam, completed by the Office of Comprehensive Health Planning of the Department of Public Health and Social Service in 1972.

Within this context, the chapter concentrates on relevant strengths and weaknesses of the current system, its uniqueness, and the apparent direction of its growth and development. The chapter is divided into two sections: A - Background and B - Observations.

A - BACKGROUND

This section describes the basic structure of the existing civilian health care system and identifies characteristics germane to the subject of this report.

TRADITION OF HEALTH CARE ON GUAM

In 1950, the Organic Act shifted federal administrative responsibility for Territorial affairs from the Navy to the Department of the Interior and introduced a considerable degree of self-rule for the people of Guam.

Prior to the Act, virtually all health care services on the Island had been provided free by the U. S. Navy. The Act made the Government of Guam responsible for health care for the civilian population. At first, the Government assumed a fully paternalistic role in health care, essentially parallel to that previously filled by the Navy. The medical community of the Territory consisted of salaried physicians on contract to the Government. Health care was provided to all civilians free of charge by a single line department of the administrative branch of the Government of Guam.

In the intervening years, the civilian health care system on Guam has evolved three primary elements:

- Guam Memorial Hospital
- The Department of Public Health and Social Service
- Private practitioners (including those employed by the Catholic Medical Center clinics and the Seventh Day Adventist Clinic).

In addition, the U. S. Naval Hospital and its physicians continue to play an important supplemental role in providing health care to the civilian population of Guam.

The services, facilities, population served, manpower and financing of each of these elements of the health care system are described briefly in the paragraphs below.

GUAM MEMORIAL HOSPITAL

The only civilian hospital on the Island, Guam Memorial Hospital, is a 242-bed governmental institution offering general acute care (including communicable disease and mental health), extended care and chronic custodial care.

As is prescribed by Public Law 7-101, the Hospital is governed by a Board of Trustees selected and appointed by the Governor with the consent of the Legislature. Executive and administrative responsibility for the Hospital is vested in the Hospital Administrator, appointed by the Board of Trustees with approval of the Governor.

Services

The Hospital provides a broad range of inpatient and outpatient medical and surgical services. In many respects, these services are similar in scope to those provided in community hospitals of similar size on the mainland.

- Medical services include pediatrics, general medicine, cardiology (including a modern constant care unit with electronic patient monitoring equipment), neurology (with support from the National Institute of Neurological Disease and Stroke Research Unit - particularly important due to the extraordinary prevalence among native Guamanians of Amyotrophic Lateral Sclerosis and Parkinsonism-Dementia).

  In addition to the medical services normally provided by a community hospital, Guam Memorial Hospital also provides care for patients with communicable diseases - particularly tuberculosis. Notable by their absence, however, are important diagnostic and treatment programs for cancer patients.

- Mental health services are provided by a neuropsychiatric unit/ Community Mental Health Center located in the Hospital. These services include psychiatric diagnosis, psychological testing, short-term inpatient care, partial hospitalization and outpatient programs. In addition, as there is no long-term psychiatric facility on Guam, the Hospital also provides long-term custodial care. This is not a service provided in Community Mental Health Centers elsewhere in the nation. As yet, there is no program for alcohol or drug abuse.

- Surgical services include obstetrics, gynecology, general surgery, ophthalmology, otolaryngology, plastic and reconstructive surgery, oral surgery, orthopedic surgery and urology.

Patients requiring subspecialty care not available at Guam Memorial Hospital are occasionally transferred to the Naval Hospital (especially for orthovoltage radiation therapy or nuclear medicine) or to stateside hospitals (for neurosurgery, cardiac catheterization, open heart surgery, or other highly specialized procedures). Profoundly retarded children, as well as those with physical or emotional handicaps so severe as to require permanent institutionalization are also transferred to off-Island residential treatment facilities. The possibility of providing subspecialty medical and surgical care through medical centers in other nations near Guam is being explored in an effort to reduce the physical strain and cost involved in transporting patients 3,800 miles to Hawaii or an additional 2,600 miles to the mainland.

The Hospital operates a 24-hour, seven-day-a-week emergency room/ outpatient clinic. Its services are available to anyone seeking them. The staff of full-time contract physicians in both primary care and various specialties is augmented by private practitioners and Naval physicians serving the Hospital on a fee-for-service basis. Medical manpower and financing are discussed later in this chapter.

Facilities

The 242 beds of Guam Memorial Hospital include 193 for acute care (including neuropsychiatry and physical medicine and rehabilitation) plus 16 for tuberculosis, and 33 for extended care. In addition, there are 32 newborn bassinets. At present, the Hospital also houses the administrative offices and central clinic facilities of the Department of Public Health and Social Service.

The extended care facility is generally regarded as insufficient in capacity. In the absence of any other extended care facility on the Island, it is often necessary to hold patients, not requiring acute care, on the acute units until extended care beds become available. This often leads to severe crowding of the acute units.

In the absence of any other facility on the Island, patients requiring chronic custodial care occupy acute beds in the physical medicine and rehabilitation unit and the neuropsychiatric/Community Mental Health Center unit.

A 99-bed proprietary convalescent home is being planned which may well relieve crowding at the Hospital. The completion date has not been determined, but probably will not occur before January of 1974.

Although the Hospital buildings are only 15 to 17 years old and were substantially renovated following Typhoon Karen, their original design is not appropriate for their current use. In brief, it is unsafe, inefficient, unpleasant and does not meet federal standards. The Revised State Plan for Health Facilities Planning and Construction for Fiscal Year 1973, prepared by the Office of Comprehensive Health Planning of the Department of Public Health and Social Service, calls for the addition of 15 long-term care beds and 5 general acute care beds, as well as the modernization of all existing beds in order to meet estimated needs for 1973. As an interim measure, pending construction of a new Guam Memorial Hospital, two temporary buildings are planned for occupancy late in 1972.

Population Served

At present, the population served by Guam Memorial Hospital can be defined only in a general sense, since clear statistical data are not available.

The total population officially reported in the 1970 census was 84,996. This figure is known to be low. A conservative estimate for 1970 is 90,000. Due to dramatic shifts in the population beginning in the middle of the last decade, straight-line projections based on the 1960 and 1970

censuses, even if adjusted for undercounting, are likely to be quite misleading. Based on the very limited data available and the estimates of immigration provided by people familiar with the recent economic growth and development of Guam, it appears that the population as of the beginning of 1972 may have been between 97,000 and 110,000. Assuming a stable military population, estimates of total population for 1980 range from 125,000 to nearly 200,000. The fact that the population is growing rapidly is an important consideration in this report in that it has significant implications in terms of the need to enlarge and make more productive the existing health care system. Fortunately, precision in population estimates is not of major significance in evaluating the recommendations contained in this report.

The Office of Comprehensive Health Planning of the Department of Public Health and Social Service estimates that as of June 1971, approximately 50,000 residents of Guam were eligible for some degree of health care within the military system. At least 23,000 are eligible for complete care within the military system. Thus, between 47,000 and 87,000 residents appear to be dependent on Guam Memorial Hospital for inpatient care. Faced with such a broad range, it is necessary to make a specific estimate concerning the number of people served by the Hospital for the purpose of discussion. The number estimated by Daniel, Mann, Johnson & Mendenhall for its facility planning project is 74,000 at the start of 1972. This appears to be a reasonable estimate.

The most striking characteristic of the resident population of Guam, other than its rapid growth through immigration and high birth, is the age distribution. The median age (20.4 years) is approximately two years younger than that for the nation and, more importantly, the percentage of persons 65 or over on the mainland is more than five times as great as that on Guam. This unusual age distribution necessarily has a significant impact on Hospital utilization and the overall health needs of the Island. For example, the Medical Records Department of Guam Memorial Hospital estimates that 33.4 per cent of its admissions are of children and adolescents under 16 years of age, that 49.5 per cent are of adults between 16 and 40 (prime child-bearing years), that 14 per cent are in the middle years of 41 to 64, and that only 3.1 per cent are 65 or over. This represents the largest percentage of young adult admissions and the smallest percentage of over 65 admissions the consultants have encountered in a community hospital or similar institution.

Perhaps attributable in part to the age distribution, the population utilizes the Hospital to a lesser extent than is characteristic on the mainland (although they utilize the Hospital more than do enrollees in mainland comprehensive prepaid health plans).

- In fiscal year 1972, the Hospital provided 700 patient-days per 1,000 population on its acute services.

- In 1972, mainland community hospitals (most comparable to the acute services of Guam Memorial Hospital) provided 1,134 patient-days per 1,000 population.

- If all Guam Memorial Hospital services are included, it provided 1,068 patient days per 1,000 population in 1972, far below the 2,325 patient days per 1,000 provided by all U.S. hospitals.

- The average utilization among eight prepaid plans in recent years has been approximately 450 patient-days per 1,000 enrollees.

As a matter of government policy, the Hospital provides medical, surgical and hospitalization services to any patient, regardless of ability to pay. (Section 49008 Code of the Government of Guam)

Patients are served by the Hospital through either of two distinct routes of entry:

- Through private physicians - that is, admission or ambulatory diagnostic and treatment procedures while under the care of a private physician

- Through the Hospital itself - that is, complete medical and surgical care delivered by physicians paid by the Hospital, regardless of the ability of the patient to pay whether or not the patient is hospitalized.

Medical Manpower

The full-time contract medical staff of the Hospital includes the following:

- Seven general practitioners

- One Board-eligible internist

- Two Board-certified pediatricians

- One Board-certified radiologist

- Two Board-certified pathologists.

Recruitment is underway to fill two authorized positions for psychiatrists.

These full-time physicians provide outpatient and emergency services and deliver care to patients admitted through the Hospital. In addition, they provide emergency care, when necessary, for the patients of private physicians. All are salaried (with provision for overtime compensation) except the radiologist, whose income is based on the patient billings attributable to his department. Additional emergency room coverage, specialty care and consultations for patients admitted by the physicians employed by the Hospital is provided by approximately 29 private practitioners who hold limited fee-for-service contracts with the Hospital.

Including the contract physicians, the active medical staff of the Hospital consists of 47 physicians, 2 dentists and 1 oral surgeon (6 of whom are full-time Naval officers) and the courtesy staff includes 6 physicians and 1 oral surgeon (5 of whom are full-time with the Navy). The distribution of the entire medical staff, by specialty and American Board status is shown in Exhibit II-1, on the following page. Not included is one unlicensed physician employed as a nurse anesthetist.

Financing

The Hospital is financed in essentially the same manner as are the regular line departments of the Government of Guam. That is, its only source of funds is the Government of Guam itself. Federal grants in aid for Hospital programs flow through the Treasury of Guam and are included in the total appropriations to the Hospital. All income from payments to the Hospital for services which it provides revert to the general fund of the Government of Guam (along with any unspent portion of the appropriation for the previous year). Thus, revenues generated by the Hospital have no direct impact on the funds available for meeting the needs of the Hospital. In recent years, the revenues generated by the Hospital have been equivalent to less than half of the appropriations for operations of the Hospital.

As a matter of government policy, all health services delivered by Guam Memorial Hospital to certain categories of patients are free, regardless of the ability of the patient to pay. Free services are provided for patients suffering nervous and mental disorders (including Amyotrophic Lateral Sclerosis and Parkinsonism-Dementia), and tuberculosis. Hospital services for crippled children are also free and are charged against the budget of the Department of Public Health and Social Service.

For other patients, the policy has been to charge those who are able to pay (directly or through insurance) and to provide free service to those unable to pay. Until recently, the fees billed have not reflected actual costs. For fiscal year 1973, however, room and board rates have been

GUAM MEMORIAL HOSPITAL

MEDICAL STAFF SPECIALIZATION AND AMERICAN BOARD STATUS

Specialty	Number Of Physicians			
	American Board Status			
	Certified	Eligible	Other	Total
General Practice	-	-	15	15
Internal Medicine	-	5	1	6
Pediatrics	4	-	-	4
Neurology	-	-	1	1
Dermatology	1	-	-	1
Preventive Medicine	1	-	-	1
Psychiatry	-	-	1	1
General Surgery	2	1	-	3
Plastic Surgery	1	-	-	1
Urology	1	1	1	3
Otolaryngology	2	-	-	2
EENT	1	-	-	1
Ophthalmology	1	-	1	2
Obstetrics and Gynecology	1	5	1	6
Radiology	1	-	1	2
Pathology	2	-	-	2
Anesthesiology	-	-	2	2
Dentistry	-	-	2	2
Oral Surgery	1	-	1	2
Total	18	12	27	57

Source: Administrative Office, Guam Memorial Hospital

increased threefold and ancillary service charges have been adjusted in an attempt to make the charges reflective of the actual costs. The new rates reflect the services rendered to the individual billed and do not (as is often the case in community hospitals on the mainland) attempt to recover the cost of free services to other patients. Also, the new charges do not include depreciation funding for the replacement of buildings or equipment.

Under the new rates, income for fiscal year 1973, projected by the Business Office of the Hospital, is expected to amount to $4,500,000; (in addition, approximately $600,000 is expected to be charged to the Department of Public Health and Social Service for special programs such as Medicaid and Crippled Children's Services). This falls far short of the fiscal 1973 operating appropriation of $7,901,998 (which does not include requests for capital appropriations and certain special appropriations such as that for architectural planning of the new Hospital).

The principal third-party carrier, AFIA, covers approximately 32,000 enrollees and dependents and has reported a slight, but as yet not quantifiable, decline in enrollments since its premium rates were increased to cover the new Hospital charges. Thus, if the decline in enrollments becomes significant, Hospital revenue projections for fiscal year 1973 may be excessive.

Actuarial analysis of health insurance plans is beyond the scope of this study. However, certain basic provisions of the Government of Guam employee insurance plan (carried by AFIA) are pointed out to establish a frame of reference. As principal benefits, the plan pays for:

- Hospital room and board, up to $45.00 per day for 120 days and half that amount for the next 120 days for each confinement

- Hospital service (drugs, laboratory, x-ray, anesthetics, blood, oxygen and the like), the first $300 plus 75 per cent of the balance up to $2,000 for each confinement

- Physicians' calls in the Hospital, $5.00 per Hawaii Relative Value Scale point (most private physicians charge $7.00), limited to one visit per day and $600 per confinement, plus a total of $45 for consultations

- Surgery, up to $5.00 per point

- Maternity benefits of up to $400, including hospitalization and all other charges

- Outpatient or private office care up to $150 per year.

Thus, while the plan may be adequate for routine illnesses, complicated serious cases would still impose considerable financial burdens on the insured. AFIA pays these same rates for off-Island care (the charges for which are significantly higher), imposing a considerable financial burden on the patient or Government agency paying for care.

The Government contributes $2.99 biweekly per employee joining the plan. Employees joining the plan pay $2.99 biweekly if single and $18.43 for family coverage, less $2.99 if spouse is also an eligible Government employee.

PUBLIC HEALTH AND SOCIAL SERVICE

The Department of Public Health and Social Service is a line department of the Government of Guam and its Director is appointed by the Governor. Although there is no Board of Trustees, the Department is assisted in policy-making functions by a variety of advisory committees, councils and commissions.

The Department serves the residents of Guam with a wide variety of public health and social services. It has four principal divisions:

- Public Health - which is of principal concern in the context of this report and includes public health nursing, the public health laboratory, tuberculosis and communicable disease control, crippled children's services, home care, maternal and child health (including family planning), health education, comprehensive health planning (in administration, but not necessarily policy), health education and accident prevention, vital statistics and public health facilities operations, mental health (the principal provider of mental health services, however, is Guam Memorial Hospital) and mental retardation

- Public Dental Health - providing prophylactic and restorative services for children

- Environmental Health - including sanitation and water pollution control

- Social Services - providing a wide variety of services, including serving as the Medicaid intermediary for Guam.

Services

Traditionally on Guam, as on the mainland, the principal role of the public health organization has been in the prevention of illness and the maintenance of good health through programs including:

- Public education concerning sanitation, personal hygiene, nutrition, recognition for the need for professional care, maternal health, child care, and mental hygiene

- Control of environmental health and communicable diseases, including environmental monitoring, sanitary inspection, communicable disease case finding, tracing and treatment, immunization and control of non-human bearers of human diseases (insects, pests and disease-bearing animals such as rabid dogs)

- Home care of chronic disease and convalescent patients

- Various health, social and, to some extent, personal services to the crippled or severely disabled, family planning, routine prenatal, postpartum and well-baby care, and medical and dental screening of children.

In addition to these traditional services, the Division of Public Health has also begun to implement primary care in the form of restorative dentistry for children (particularly important due to the unusually high incidence of dental decay among Guamanian children), and primary and specialty care (not involving hospitalization) for patients of all ages. These services include office diagnosis and treatment of patients with pediatric, internal medicine, otolaryngology, ophthalmology and obstretical problems visiting special clinics operated by the Department (as well as the communicable disease patients normally seen by public health physicians). While all of these services are not common among public health departments on the mainland, they have recently been offered in a few medically underserved communities. The Department of Public Health and Social Service has submitted a grant application to the Federal Health Services and Mental Health Administration for the support of a Family Health Center to expand primary care services (for which it would then be obliged to charge). This application has been denied but probably will be modified and resubmitted.

Generally speaking, the services of the Department of Public Health and Social Service are available to anyone on the Island of Guam. More specifically:

- Public education services are available to all residents, including the military

- Environmental health services are available to and benefit all residents of Guam, although sanitary inspections and environmental monitoring do not extend to military installations

- Home care and other health, social and personal services are available to all, except that dental services are limited to children and family planning services are limited to adults 18 and over

- Crippled children's services are available up to age 21, but chronic disease services are available once they reach 21.

Utilization of public health services is considerable and shows that the Department provides a substantial portion of the total health care on the Island. Utilization statistics for major services in which there has been direct contact with individuals in fiscal year 1972 are shown in Exhibit II-2, on the following page.

With the opening of new facilities (discussed subsequently), services, especially those other than home visits, are expected to increase significantly over the next few years.

Facilities

The Department of Public Health and Social Service maintains its central office at the Hospital. This includes administrative offices, laboratories and special clinics. Except for services necessary as the result of joint tenancy in the same building, the Department of Public Health and Social Services does not share support services with Guam Memorial Hospital. Construction of a new central building (including enlarged diagnostic and treatment facilities) on the opposite side of the Island is now 50 per cent complete.

A large diagnostic and treatment center was recently opened in Inarajan. Four small village health centers (usually with a single examining room) and seven intermediate-sized village health centers are located in population centers around the Island. Two area health centers (similar to that in Inarajan) are planned for future construction in Agat and Dededo. These are shown on the map in the Exhibit on the following page.

The geographic dispersion of the public health centers may well promote increased utilization as highway traffic becomes heavier over the next few years, making it difficult for patients to reach the Hospital and physicians' offices (all of which are located on Marine Drive between Agana and Upper Tamuning and on roads between Marine Drive and the Hospital).

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICE
DIVISION OF PUBLIC HEALTH

MAJOR DIRECT CONTACT SERVICES
Fiscal Year 1972

Service	Patients	Visits
Maternal Health Clinics		
Prenatal	960	3,949
Postpartum	n.a.	429
Family Planning	n.a.	2,323
Child Health Clinics		
Screening & Limited Care by Physicians Only	2,909	3,619
Screening & Limited Care by Nurses Only	1,038	6,365(a)
Rescreening by Pediatricians	n.a.	242
Pediatric Screening and Care of Retarded Children	n.a.	350
Orthopedic Clinic for Crippled Children	n.a.	671
Cardiac Clinic for Crippled Children	n.a.	403
Special Clinics(b)		
Ophthalmology	476	533
Otolaryngology	245	1,213
Communicable Disease Clinics		
Chest - Physicians Only	1,186	1,294
Chest - Nurses Only	n.a.	13,230
Mixed Primary Care Clinic(c)		
(Adult, Sick Child, Chronic and Communicable Disease)		
Physicians	n.a.	1,992
Nurses	n.a.	166
Public Health Nursing(d)		
Home Visits	n.a.	10,147
Visits to Nurses' Offices	n.a.	4,865

n.a. - Not Available.

(a)Includes patients counted as first seen by physicians rather than nurses
(b)Mostly children
(c)End of year only
(d)Excludes clinics shown above.

Source: Division of Public Health

Manpower

The Division of Public Health employs two physicians in primarily administrative roles, four full-time physicians with mixed administrative and clinical roles in pediatrics, maternal and child-health, internal medicine and communicable diseases. In addition, it has three part-time physicians serving children and the maternal health program and employs three specialists for weekly ophthalmology and otolaryngology clinic sessions. Orthopedic and plastic surgery care for crippled children is provided by two physicians on a fee-for-service basis.

The Division of Public Health reports considerable success in utilizing specially trained nonphysicians to perform any of the routine duties traditionally performed by physicians. In particular, it has trained 53 public health nurses to screen and evaluate children and prenatal women. In addition, dental technicians are being trained to provide primary dental care at the public health dental clinics. It is planned that at Inarajan, 16 of these specially trained personnel will be functioning under the supervision of four dentists. Similar arrangements are planned for the three other regional diagnostic and treatment centers now under planning and construction.

The utilization of specially trained allied professionals to perform duties which though traditionally performed by physicians and dentists do not in fact require advanced professional training, is a trend which has gained increasing momentum on the mainland in recent years. The Department of Health, Education and Welfare, American Medical Association, American Hospital Association and the American Nurses Association, and other professional organizations are engaged in activities to enlarge the role of allied health professionals within the health care system.

Financing

Virtually all public health programs are offered free-of-charge, regardless of the ability of recipients to pay. There is a modest charge for health certificates and certain other documents.

As with the Hospital, all operating and capital funds for the Department are appropriated by the Legislature. The appropriation for operating funds in fiscal year 1973 amounts to $6,166,035; however, a substantial portion of this is provided through federal grants in aid which flow through the general fund. Of the total appropriation, $3,045,798 is for the Public Health Division.

PRIVATE PRACTITIONERS

Twenty-nine civilian physicians on the Island are now in private solo or group practice. Four are employed by the Seventh Day Adventist Clinic and seven by the Catholic Medical Center clinic. Three specialists in obstetrics and gynecology have organized a private group practice - the Guam Medical Clinic. Fifteen are engaged in solo practice. In addition, some full-time Navy and Public Health physicians maintain small private civilian practices.

The number of Navy physicians in part-time civilian practice changes frequently. While these physicians are an important part of the civilian health care system on Guam in that they sometimes represent specialties not found among the civilian physicians, the quantity of medical care they provide is not generally considered to be significant.

Services

The private physicians offer primary care and care in most major specialties and some subspecialties. These services include care in the following categories:

General Practice
Pediatrics (including Pediatric Hematology)
Internal Medicine (including Cardiology)
General Surgery (including Thoracic)
Plastic and Reconstructive Surgery
Urology
Ophthalmology
Otolaryngology
Obstetrics and Gynecology
Anesthesiology

Some specialty care services not available through private physicians or those employed by the Government of Guam which might reasonably be expected in an area with the population of the size of that of Guam include:

Gastroenterology
Physician Medicine and Rehabilitation
Radiation Therapy
Nuclear Medicine
Dermatology

However, specialists in the last three categories are currently available at the U. S. Navy Hospital.

Facilities

The two clinics with religious sponsorship - Catholic and Seventh Day Adventist - have attractive new buildings comparable to anything of their kind on the mainland. In addition to consultation and examining rooms, they have pharmacies, facilities for routine X-rays and laboratory procedures and offer dental as well as medical services. A third modern group practice building - the Polyclinic - is in the final stages of construction. A smaller, somewhat older, but apparently adequate building serves the three-physician Guam Medical Clinic.

There are two medical office buildings. One serves three physicians and the other, eight physicians and one dentist. Both have pharmacies. Both appear inadequate in size. One new physicians' office building is being planned.

The remainder of the physicians use individual private offices.

Population Served

Interviews with selected physicians suggest that the number of patient visits per physician is roughly comparable to that on the mainland. That is, between 150 and 200 office and hospital visits per week per physician in general practice. Since most of the specialists have substantial general practices, statistical comparison of their workloads with those mainland specialists - who tend to have few general practice patients - is not feasible. However, in the opinion of the consultants, their workloads are roughly equivalent to mainland standards.

In general, it appears that no segment of the civilian population of Guam is unable to receive the services of physicians due to physician shortage (except in a few specialty areas). That is, it appears that the quantitative demand for physicians is nearly met on Guam.

Medical Manpower

Among the 29 civilian physicians in primarily full-time private practice, there is an unusually high proportion of surgeons in relation to medical specialists. The table on the following page shows the distribution of private physicians by specialty category on Guam and on the mainland (as reported by the American Medical Association, 1970).

Specialty Category	Percentage Of Office Based Physicians On Guam	On Mainland
General Practice	28%	27%
Medical Specialties	14	23
Surgical Specialties	55	31
Other Specialties	3	19
Total	100%	100%

Thus, it is understandable that the surgical specialists reported that many - and in some cases - most of their patients did not require surgical care.

None of the private physicians interviewed utilize allied health professionals to perform routine duties traditionally carried out by physicians - as is done in the Division of Public Health.

Financing

All private physicians charge patients on a fee-for-service basis. For the most part, private physicians on the Island utilize the same fee schedule; that is, the 1965 scale of the Hawaii Relative Value Studies with a multiplying factor of 7 (although AFIA pays only by a factor of 5). By contrast, the factor utilized in calculating fees for medical services by the Hospital is 5. The physicians reported that they collect more than 90 per cent of the fees they charge. The chief difficulty in collecting fees was reported to be late and/or inadequate payments by Medicaid and the Aetna Insurance Company. The single largest source of fee payment is AFIA, followed by direct payment by patients.

Physicians at the Catholic Medical Center and Seventh Day Adventist clinics are salaried. Catholic Medical Center physicians are permitted to retain earnings from services to the Hospital and from part-time outside practice. Seventh Day Adventist physicians are usually two-year religious service volunteers and receive salaries of less than $8,000 per year.

U.S. NAVY HOSPITAL

The Navy still continues to provide nearly all routine health care services to military personnel, certain contract civil service employees, their authorized dependents, veterans claiming VA health benefits, and Trust Territory residents requiring care not available in the Trust Territories. In total, as was mentioned earlier in this report, as many as 50,000 residents of Guam may be eligible for some degree of health care by the Navy.

In addition, the Navy Hospital provides health care to the civilian population in emergencies, such as the aftermath of Typhoon Karen and a massive outbreak of food poisoning in a labor camp. Also, it makes available certain diagnostic and treatment facilities not available elsewhere on the Island, such as a newly established nuclear medicine facility and orthovoltage radiation therapy on a contract fee schedule to Guam Memorial Hospital.

Thus, the Navy hospital continues to play an important supplementary role in the overall delivery of health care services to the civilian population of Guam.

B - OBSERVATIONS

This section presents several key observations concerning unique characteristics of the current health care system, and attitudes concerning changing the system. It is limited to major observations related to the feasibility of establishing a comprehensive prepaid health care system and physician group practice on Guam.

CURRENT ORGANIZATION

Key observations concerning the current health care system are discussed in the paragraphs below.

The Health Care System Is Becoming Increasingly Fragmented And Services Are Beginning To Overlap

Up to the time of the Organic Act, the entire health care system of Guam operated under a single authority, that of the U. S. Navy. Since then, the history of health care has been one of decentralization. This has benefited the residents of Guam in several respects:

- They now have more ready access to health care services through the Public Health village facilities and area diagnostic and treatment centers

- They now have considerable freedom of choice in the selection of physicians and can seek care through the Hospital, Public Health facilities or a variety of individuals and groups of practitioners.

However, several problems have been posed by the decentralization:

- Discontinuities have arisen. For example, in fiscal year 1972, nearly 1,000 expectant mothers received prenatal care from the Division of Public Health. Yet, all were delivered by private or Hospital physicians, not by those who rendered the prenatal care. It has been reported that medical complications have arisen due to poor communication between those giving prenatal care and those assisting in delivery

- Costly facilities and services have been duplicated. For example, the Hospital, the three group practices and the two physicians' office buildings - all located in the same general area - maintain separate pharmacies, accounting services and little used but expensive diagnostic devices and facilities

- Government policies have become conflicting. For example, the Government provides a wide range of primary health care services through the outpatient facility of the Hospital and charges for those services - the majority of the patients being able to pay or covered by health insurance. On the other hand, some equivalent services are now being offered by the Division of Public Health, free of charge, regardless of ability to pay. Thus, while trying to make the Hospital more self-supporting, the Government is offering some competing services free of charge to all.

If present trends continue, it appears that the Division of Public Health will participate increasingly in the delivery of primary care, in competition with the Hospital and private physicians. In addition, it appears that the number and size of private clinics will increase and tend to increase investment in support services and facilities. While these trends promise a greater range of choice available to patients, they also will tend to increase the relative cost of health care and may increase discontinuity of care.

The Special Skills Of Some Physicians Are Not Utilized Effectively

Patterns of patient referral do not appear to be well developed on Guam. That is, in contrast to the mainland, a patient on Guam is more likely to receive all physician services from the physician he first consults, regardless of the nature of the illness and regardless of the specialty training of the physician. Thus, surgeons treat "medical" problems, internists and general practitioners perform minor surgery, and pediatricians treat adults. For example, surgeons have reported that more than half of their office visits are from patients without current "surgical" problems and that the majority of their patients are not referred to them by other physicians. On the mainland, surgeons often confine their practice to surgery and refuse to see non-emergency patients who have not been referred for specific surgical problems by general practitioners or other specialists. Some degree of overlap among specialists is unavoidable, but the extent to which it is found on Guam is considerably greater than that encountered on the mainland.

This practice is seen as undesirable in two respects:

- The unique skills of highly trained specialists and subspecialists are not effectively utilized and strengthened through concentrated practice

- Patients are sometimes treated by physicians who, while competent, are less skilled than are other available specialty physicians in the kind of care required by the particular patient.

Such overlap on Guam is uncommon. However, when patients clearly require the services of a specialist in a well-defined area of practice such as ophthalmology.

In part, the absence of well-defined referral patterns can be explained by the relatively high ratio of surgeons to general practitioners and medical specialists on Guam. Hopefully, continued recruitment by the Hospital of physicians other than surgeons will provide a climate in which referral patterns can be strengthened.

Well developed referral patterns between primary care physicians and specialists are generally considered to be the key to the success of large multispecialty group practices.

Peer Review, As A Method Of Ensuring Quality Control, May Be Weak

In conformance with requirements of the Joint Commission on the Accreditation of Hospitals, the Hospital maintains active committees of physicians and administrative personnel charged with reviewing the utilization of Hospital facilities, the adequacy and completeness of medical records and the professional performance of the medical staff. However, among the physicians and other Hospital personnel interviewed, there existed a wide range of opinion concerning the effectiveness of the review committees in controlling the quality of medical care in the Hospital. Some maintained that the committees were very effective in promoting high quality efficient care. However, others claimed that the current system of review is superficial and ineffective.

In the absence of a comprehensive medical audit of the Hospital (this is not a part of the accreditation procedure), the consultants cannot determine which point of view is more accurate. It is significant that there is considerable disagreement among members of the staff regarding peer review.

If a vigorous and effective system of peer review does not in fact exist, one will have to be developed if a comprehensive prepaid health care plan is to be implemented.

The Medical Community On Guam Is Unusually Young

The practicing civilian physicians on Guam are particularly young in comparison to those on the mainland. As is shown in the table on the following page, more than half are under 40 years of age and nearly 90 per cent are under 50 years of age.

Age of Physicians	Per cent of Guam Civilian Physicians	Per cent of All U. S. Physicians
Under 30	7.9%	11.5%
30-39	44.8	27.0
40-49	36.9	24.6
50-59	5.3	17.5
60-69	5.3	12.0
70 and over	0	7.4

This has major implications for planning the health care delivery system.

- The need to replace retiring physicians over the next decade will be minimal.

- Many of the physicians may not have reached their peak of productivity. Thus, they should be able to absorb some increase in workload.

- It is generally presumed that younger physicians are more adaptable and thus may more readily be included in a changed health care delivery system.

The Quantitative Health Care Needs of Guam Are Not Well Defined

As noted earlier in this chapter, the population of Guam and the proportion dependent on the civilian health care system has not been determined except in broad terms, nor are projections of growth precise. Consequently, it is exceedingly difficult to estimate the quantity of health care service which will be required.

Further, even if the population were clearly defined, the magnitude of its quantitative health care needs would be difficult to estimate due to the unique composition of the population. The number of physicians in relation to the total population is lower than that on the mainland and the utilization of Hospital facilities is somewhat lower as well. However, the unusually young and presumably healthier population tends to reduce the quantitative need for health services - to an undefined degree. Thus, it seems inappropriate to apply existing mainland studies of health care needs on Guam. In 1973, when results of the 1969 National Health Survey are released by the Department of Health, Education and Welfare, it may be possible to relate quantitative health care needs to specific age groups (adjusted for the unique prevalence of some illnesses on Guam) and arrive at a realistic estimate for Guam.

Given the lack of precise estimates of quantitative health care needs, the cost of operating a comprehensive prepaid plan cannot be estimated with precision.

The Current Rate Of Growth And Economic Development Will Strain Financing Of The Health Care Delivery System

Guam is now going through a period of very rapid growth and economic development. The high birth rate among Guamanians and the immigration of laborers and skilled workers from the mainland and other nations has produced an explosive increase in population. Meanwhile, construction and other investment has increased dramatically, often with Governmental encouragement in the form of long-term tax abatements. Land values and construction costs have gone up and the general cost of living has risen to the point at which it is generally assumed to be higher than any other place in the United States. Personal income and tax revenues have increased as well. However:

- As is typical of areas undergoing rapid economic growth, increases in personal income tend to lag behind increases in the cost of living. Although reliable data are not available at this time, this may well be the case on Guam

- The Territorial treasury is strained as tax abatements restrict revenues and as it faces increasing demands for needed capital improvements.

Consequently, proportionately less money, both public and private, is likely to be available to support health care.

ATTITUDES

The concept of comprehensive prepaid health care and group practice is not new to Guam. It has been under serious discussion by various groups for more than two years. At this time, however, there does not appear to be a broad consensus regarding its desirability.

The Office Of Comprehensive Health Planning Favors Comprehensive Prepaid Health Care And Group Practice

The Comprehensive Health Plan for the Territory of Guam was completed this year by groups of citizens, representatives of the Government of Guam and health care providers. It is clear in its support of the concept of comprehensive prepaid health care and group practice, with particular reference to the pattern of the Kaiser-Permanente approach.

Other non-physicians interviewed in the study also tend to support this view, with various degrees of enthusiasm.

There Is Little Enthusiasm Among Physicians For A Large Prepaid Group Practice

One of the chief tasks of this study has been to assess the attitude of Guam's medical community toward comprehensive prepaid health care and group practice. The majority of physicians interviewed were unenthusiastic concerning group practice, a few would welcome such an arrangement, and a few clearly would not wish to participate in such a group. Also, it is our opinion that fewer than half of the physicians interviewed have the particular combination of personal and professional objectives, style of practice, and personal attitudes which would enable them to adapt readily and successfully to a highly organized group practice of the kind required for a successful prepaid health care system.

- Collectively, the physicians on full-time contract to the Hospital appear relatively well suited to group practice. They have adapted to practice within the context of a large and complex organization which includes other physicians with whom they share responsibilities. They have expressed willingness to give serious consideration to continuing to practice within an organizational context especially if the prepayment plan offers individual incentives for productivity. For these physicians a large prepaid group practice would require relatively little adaptation and might offer significant financial rewards.

- The physicians already in group practices would also require relatively little adaptation to a larger group practice. However, it might be difficult for a large group to offer adequate incentives to draw the three obstetrics and gynecology specialists from the relative independence they enjoy in their successful small group practice in the Guam Medical Clinic. Additionally, it is most unlikely that the members of the Seventh Day Adventist Clinic would be willing to abandon their organizational identity in view of their missionary role.

- Several private physicians currently planning the formation of a new group practice are seeking to achieve the economies of shared facilities. However, they are not now planning close integration of their medical practices. For these physicians, adaptation to a large group with shared responsibility for patient care might present significant problems.

- Among the solo private practitioners, the desire to maintain their own individual styles of practice is pronounced. For these physicians, the rules, regulations, organizational hierarchies, sharing of patient care responsibilities and close peer review characteristics of large group practices might be objectionable. Clearly, membership in a large group practice would limit their personal prerogatives.

- Among the public health physicians, however, there was considerable enthusiasm for greater organization of medical care through formation of a large multi-specialty group. Although the current organizational structure of the Division of Public Health is quite different from that of a large group practice, it contains many of the same elements; namely, size, structural complexity, sharing of patient care responsibilities, and reviews of professional performance.

CHAPTER III

FEASIBILITY OF A HEALTH MAINTENANCE ORGANIZATION

III - FEASIBILITY OF A HEALTH MAINTENANCE ORGANIZATION

This chapter outlines the concept of a comprehensive prepaid health care system and group practice in the form of a "Health Maintenance Organization" and the objectives and organizational structure characteristic of such entities. It then presents the consultants' conclusions regarding the feasibility of establishing a HMO plan on Guam.

A - HEALTH MAINTENANCE IN CONCEPT

This section reviews the objectives which are held in common by "Health Maintenance Organizations" (HMO's), the basic organizational approach generally utilized in achieving those objectives and some of the typical advantages and disadvantages of this approach.

OBJECTIVES

In concept, HMO's have three principal objectives:

- To make the health care system more effective in maintaining good health as well as in treating illness
- To make health care delivery more efficient in its utilization of health care facilities and manpower resources
- To reduce the overall cost of health care to consumers and to protect them against the high cost of serious illness.

ORGANIZATIONAL APPROACH

In organizing to achieve the above objectives, HMO's have developed the following key characteristics:

- They utilize the principle of rational division of labor to conserve manpower resources by utilizing the highest skill level of each member and assigning tasks not requiring advanced training to

those with lower skill levels. Thus, at least in theory, the gastroenterologist never sees a patient who does not have a known or suspected gastrointestinal problem. In some HMO's, specially trained personnel have assumed many of the routine duties traditionally performed by physicians.

- Physicians are rewarded for keeping patients health. Under the traditional system of health care a physician often can make the most money for his effort when a patient is hospitalized and receiving extensive treatment. Under the HMO concept, the physician can make the most money when the patient requires no care at all. Thus preventive medicine assumes greater monetary importance and receives greater attention and effort.

- There is a positive incentive for peer review in that, if the course of treatment prescribed by a physician is not the most appropriate, the long-term total cost of care may be increased, thus decreasing the income of the physicians.

- Care of each patient becomes the responsibility of the group practice as a whole, thus there is no loss of professional income or status when one physician refers a patient to another group member better able by specialty training to care for the particular needs of the patient.

- The financial, physical, technical, and manpower resources of the physician group are shared to achieve the lowest net operating cost and consequently increase income for physician and decrease cost to the patient.

- Payment for comprehensive health care (preventive and curative) is a fixed sum paid in advance and is not related to the specific services rendered to an individual patient. Therefore, the patient can budget his health care expenses and the HMO can budget for predetermined revenues.

- Hospitalization as well as ancillary services for diagnosis and treatment are included in the prepayment package.

- Enrollment in existing HMO's is offered on an optional basis to defined groups of potential members.

ADVANTAGES AND DISADVANTAGES

The basic characteristic of HMO's offer several potentially significant advantages and disadvantages for both patient and physician.

Advantages For Patients

- The ready availability and accessibility of various specialists whenever needed
- Assurance that the professional performance of each physician is under constant peer review
- Assurance that the system does not reward the physician for unnecessary procedures or treatments
- Predetermination of the cost of health care (often lower than the average cost under the traditional system).

Disadvantages For Patients

- Limited freedom in selecting personal physician
- Possible weakening of close doctor-patient relationships and development of an impersonal atmosphere
- Possible long waits to see physicians with heavy workloads
- Possible medical neglect if incentives for physicians are not well balanced or if peer review for quality control is lax.

Advantages For Physicians

- Opportunity to devote practice to area of special training
- Ready availability of consultations
- Availability of well developed ancillary services and specialized equipment and facilities
- Freedom from routine administrative details of practice management
- Relative stability of income

- Fringe benefits and tax advantages of corporate practice

- Adequate planned coverage for time off.

Disadvantages For Physicians

- Required conformity to rules, regulations, lines of authority and standards of practice

- Possibility of overspecialization and lack of variety in practice

- Possible loss of close doctor-patient relationships

- Possible alienation from physicians outside the group

- Liability for the errors of others

- Time consuming committee meetings

- Possibility of unsatisfactory compensation arrangements.

B - CONCLUSIONS

This section presents the consultants' conclusions regarding the feasibility of establishing an HMO on Guam.

There Are Several Arguments Concerning The Establishment Of A Group Practice Prepayment Plan (HMO) On Guam

The arguments in favor of the establishment of a group practice prepayment plan include, at a minimum, the following:

- Provision of an organizational climate and positive incentives for physicians to develop patient referral patterns which would better utilize their specialty training and skills

- Provision of positive incentives for greater attention to preventive medicine and the early detection and treatment of disease, and promotion of rigorous peer review for quality control

- Control of the cost of health care by better utilization of manpower resources, supporting services and facilities, as well as by introducing incentives for appropriate hospital utilization

- Establishment of an alternative health system and financing mechanism to the existing commercial insurance (indemnity) plans now available

- Coordination and integration of the provision of health care services on Guam, which are at present highly fragmented.

The arguments against the establishment of a group practice prepayment plan (HMO) include at least the following:

- Establishment of a group practice with the physicians now practicing on Guam would be at best difficult to achieve, if possible at all

- Consolidation of health care services now provided by different governmental organizations would need to occur; the complete reorganization of Guam Memorial Hospital and the Department of Public Health and Social Services would appear to be very difficult to achieve within the near future

- Establishment of a prepayment system on Guam could not occur without a detailed study of financing channels and the development of realistic capitation rates, for which no experience data is presently available

- Development of extensive systems for patient referrals and peer review would need to be developed to have a successful HMO on Guam; neither of these appear likely to occur among the physicians now practicing on Guam

- Establishment of an effective HMO on Guam would require the utilization of a broad range of medical and paramedical personnel; additional health manpower personnel would therefore be required on Guam

- Development of a government-sponsored HMO on Guam might prove too costly to the Government at this time.

It would appear that the obstacles to overcome in the establishment of an HMO on Guam are too great at this time.

Other Opportunities Exist For Improving The Health Care System

Detailed analysis of opportunities to strengthen the health care system on Guam without recourse to an HMO is outside the scope of this study. However, it is obvious that the existing system could be improved and that a strengthened system would establish a more favorable climate for creation of an HMO at a later date.

Hypothetical examples of such changes - intended as illustrations, not as recommendations - include the following:

- Improved patient referral patterns could be developed by modifying health insurance benefit incentives to provide higher payments to physicians for services within their particular area of competence and by narrowing the scope of hospital privileges accorded individual members of the medical staff in keeping with their particular qualifications

- Preventive health care could be promoted by expanding certain services of the Department of Public Health and Social Service and by augmenting insurance benefits for preventive services when rendered by the Hospital or private practitioners

- Utilization of allied health professionals and sharing of support services could be improved by construction of offices for private physicians at the Hospital site which provide shared allied health professional and support services

- Quality control could be strengthened through more rigorous peer review, or external medical audit.

An HMO Could Be Established On Guam; However, Establishment Of An HMO At This Time Is Not Recommended

The health care resources existing on Guam could be reorganized to establish an HMO which would capitalize on existing strengths and overcome weaknesses of the current system. A workable HMO plan could be established at this time. However, to do so would require radical reorganization and drastic change in the existing health care and governmental structures. Vigorous opposition to establishment of a viable HMO as described in the appendix to this report could be expected from some physicians and various elements of the Government of Guam. As set forth previously in this section, the difficulties inherent in attempting to establish an HMO at this time might be insurmountable and could impede the attainment of high priority health care objectives, especially the construction of a new Guam Memorial Hospital. Therefore, the consultants do not recommend creation of an HMO at this time.

However, since decision rests with the Government of Guam, alternative approaches to the establishment of such a plan are discussed in the appendix.

CHAPTER IV

PLAN OF ACTION

IV - PLAN OF ACTION

This chapter presents specific action steps which the Board should undertake in establishing its policy on the improvement of health care services on Guam.

1. The Board of Trustees of Guam Memorial Hospital should review the report and discuss its implications with the consultants. In its deliberations, particular attention should be given to the following considerations.

- The need to make health care services more efficient in the utilization of manpower resources and facilities to control the cost of health care and more effective in improving and maintaining health.

- The major difficulties inherent in major reorganization of health and Government structures at this time.

- The possibility of strengthening the existing health care system and establishing an improved climate for creation of an HMO at a later date.

2. The Board should then undertake discussions with other branches of the Government of Guam and other concerned parties to determine their views.

3. After due consideration, it is strongly recommended that the Board decide whether its policy will be to establish an HMO at this time or to explore other opportunities to strengthen the existing health care system. Regardless of the decision, planning for the urgently needed replacement of the Guam Memorial Hospital building should proceed without interruption.

4. If the policy of the Board is to support establishment of an HMO at this time, it should seek Governmental approval for its policy and encourage the prompt organization of an HMO Board of Directors to oversee detailed planning and subsequent operation of the HMO.

5. If the policy of the Board is to explore other opportunities to strengthen the existing health care system without recourse to an HMO at this time, it should undertake a comprehensive assessment of other options. The objective of this effort should be the development of a workable plan for better utilization of available financial and human resources in the improved delivery of health care services. This effort should concentrate on identification and evaluation of alternatives (other than anHMO) for the organization, delivery and financing of health care.

In considering the organization of health care services, particular attention should be given to several areas:

- Opportunities to coordinate planning and the division of responsibility for health care to prevent wasteful duplication and competition among Guam Memorial Hospital, the Division of Public Health and private practitioners and to ensure that comprehensive services are provided

- The potential for greater utilization of allied health professionals

- Opportunities to achieve more effective utilization of medical manpower through improved patterns of patient referral.

With regard to delivery of health care services, areas which should be explored include:

- The availability of comprehensive health services (including preventive care) throughout the system as a whole

- The continuity of care as patients move from one segment of the health care system to another

- Continuing review of the effectiveness of health care services to ensure quality control.

The financing of health care services is important not only in terms of the costs involved, but also because financial incentives can play a critical role in determining the effectiveness of the system. In considering this topic, particular attention should be given the following:

- The most desirable method for the Government of Guam to assume its share of the total cost of health care services, whether through continued direct support of major segments of the system, payment of some or all of the health care costs for patients of limited means ("abatement"), subsidization of health insurance premiums, or some other method

- The financial incentives which might promote better health care and effective cost control

- The ability of Guam Memorial Hospital and others to collect charges due from patients who are able to pay.

The end product of this effort should be a written plan for improved health care and the better utilization of available financial and human resources.

APPENDIX

ESTABLISHMENT OF AN HMO ON GUAM

This appendix presents recommendations in principle for application of the concept of comprehensive prepaid health care and group practice in the form of an HMO on Guam. It does not constitute a recommendation that an HMO actually be established. First, it proposes a statement of purpose for the plan. It then discusses the basic functions and relationships necessary for organization and operation of the plan. These include:

- Ownership
- Policy-making and control
- Delivery of hospital services
- Delivery of medical services
- Financing
- Administration.

Each of these is described in concept. Alternative approaches are then identified, evaluated and discussed.

PURPOSE OF PLAN

The avowed purpose of the proposed plan should be to improve the quality of health care and the effectiveness with which it is delivered through the efficient organization of a comprehensive system of health services with the objective of continuously maintaining the highest level of health feasible among those receiving its services.

OWNERSHIP

The basic ownership of the plan could take several forms and necessarily is a major consideration in determining the appropriate organization for policy-making and control. Ownership could be either of two forms:

- Private
- Public.

Under private ownership, the plan could be either profit-making or not-for-profit. However, private ownership does not seem appropriate for an organization created by the Government and, as will be discussed later,

in large part subsidized by the Government. It appears more desirable for the Government to exercise its responsibility for health services (prescribed by the Organic Act) through ownership of the HMO plan. It should be noted that governmental ownership would not preclude service contracts between the HMO and other organizations or individuals.

POLICY-MAKING AND CONTROL

Effective policy-making and control is critical to the success of any organization. It involves:

- Defining long-range goals and objectives for the organization

- Developing appropriate plans for achieving those goals and objectives, making policy decisions necessary to implement plans, and assuring that necessary resources are available for operation of the organization

- Monitoring and controlling activities to ensure that plans and policies are appropriate and are being followed.

While owned by the Government, responsibility for policy and control of the HMO could be assigned in various ways. The responsibility could be given to:

- A new line department of the Government

- An existing department such as that of Public Health and Social Service

- A Board of Trustees operating as a branch of the Government (the approach currently utilized for Guam Memorial Hospital)

- Guam Memorial Hospital

- A quasi-independent Board of a public benefit corporation (such as the Power Authority).

Due to the complexity of an HMO, it would be desirable to include a number of people representing various skills and interests in making policy and exercising control over the HMO. Therefore, operation as a new department or under an existing department of the Government of Guam is not recommended.

If operated as a branch of the Government with its own Board, or under Guam Memorial Hospital, it would still be subject to many of the rules and regulations which govern the operation of other departments of the Government and which have tended to impede the growth and development of Guam Memorial Hospital. Specifically:

- Inability to float bonds to obtain capital without affecting the debt limit imposed on the Government of Guam by the Organic Act

- Difficulty in adjusting its operating budget when revenues change or unanticipated needs arise

- Inability to accrue surpluses for expansion or the funding of depreciation.

The remaining alternative is creation of a public benefit corporation unencumbered by the problems identified above. This alternative is deemed viable and, if an HMO is to be established, is strongly recommended.

The Government would exercise its ownership of the HMO through establishment of the basic purpose of the organization and definition of the scope of its responsibilities and through the appointment of its Board. Beyond that, responsibility for policy-making and control of operations would be vested in the Board.

Without reference to the organizational relationships between them, an HMO contains two operating groups with different functional responsibilities. One provides hospital services and the other provides medical services. Either or both of these can be under the direct control of the HMO. On the other hand, either or both can be independent of the HMO, providing services on a contract basis.

In a well-developed sophisticated system, both operating components are highly complex and each has important priorities and needs which are unique. Therefore, it is recommended that the two operating components be governed separately, each by its own governing Board. During the early stages of development, both could be governed by a single body, but the complex and cumbersome nature of the task might overwhelm the governing body or, at least, slow growth and development. This is a particularly important consideration since, as will be discussed later, the hospital and the medical group both should have functions and responsibilities beyond those of the HMO itself.

The Board of Trustees should be small enough to function efficiently as a decision-making body, yet representative of the sponsors and consumers of health care. Thus, an appropriate Board might have between seven and

fifteen members, including representatives of the Government and other major sponsors of health services, as well as consumers of those services, perhaps chosen by enrollees on an area basis. In addition, the Board may choose to develop one or more advisory committees of enrolles to ensure effective communications and to provide enrollees with an opportunity to participate in determining the services to be offered by the plan.

To ensure adequate professional input and awareness of the objectives, programs, needs, and problems of the providers of health services, they, too, should be represented on the Board - ex officio and without vote. Although voting health service provider representation is often found on other such boards, this has often presented the potential for conflict of interest. For example, a physician member of a hospital Board may find himself in a quandry if, as a Board member, he believes he should vote for a sanction against a member of the medical staff which he himself represents.

DELIVERY OF HOSPITAL SERVICES

There are two kinds of hospital service needed by an HMO. One is inpatient care for enrollees. The other is the diagnostic and treatment services for ambulatory patients which generally can be most economical when based at a hospital; these would include sophisticated laboratory procedures, diagnostic radiology (with the possible exclusion of routine procedures), and physical therapy. These services could be provided to the HMO by one or more hospitals. Presumably, the HMO would seek the best combination of price and level of service in seeking the services from a hospital. However, since the proposed HMO would be a governmental organization, and since utilization of Guam Memorial Hospital by the HMO would assist the Hospital in achieving economies of scale and operating at a lower cost to the Government, the Government might well choose to make Guam Memorial Hospital the sole supplier of hospital services to the HMO. Since, as was indicated above, it would be preferable for the Hospital to be operated by a Board which is independent of the HMO Board and, as will be indicated subsequently, the Hospital should continue to provide all of its current services to non-HMO enrolles as well, the basic relationship between Guam Memorial Hospital and the HMO should be a contract for services. This is further discussed under the topic of financing.

DELIVERY OF MEDICAL SERVICES

Within an HMO, medical services would include preventive health care, and the diagnosis and treatment of diseases among both ambulatory patients and inpatients. It would include utilization of the services of allied health

professionals to perform duties traditionally performed by physicians, but not requiring medical training.

As was recommended earlier in this appendix, the physician group would have an independent Board to develop policy and exercise control over the activities of the group. Such a Board could be composed primarily of professionals or primarily or exclusively of laymen and could be either appointed or elected by the physicians themselves. Since basic non-professional policies (such as the services to be provided to HMO enrollees and the setting in which they should be provided) would all flow from the Board of the HMO, it would appear to be redundant for the Government or the HMO to require that the Board of the medical group be composed primarily of laymen. Also, this probably would not be acceptable to the physicians. Since the principal function of the Board of the medical group would be to determine matters of professional policy, it is recommended that the Board be comprised of physicians. It might be desirable to have representatives of the Hospital and the HMO represented on the medical group Board ex officio and without vote.

The physician directors of the medical group could be appointed by the Government or elected by the members. While appointment of directors might produce a Board more responsive to the wishes of the HMO, it may be necessary to permit internal election of the Board members to facilitate recruitment of physicians particularly concerned with their professional independence.

There are several approaches through which physician services might be provided to the HMO.

- All of the operations of the group could be through subcontracts to existing groups and individual practitioners.

- The physicians currently employed by the Guam Memorial Hospital, augmented by other physicians recruited from Guam and elsewhere, could form the group.

- An entirely new group of physicians could be brought to the Island.

- The Division of Public Health could be separated from the Department of Public Health and Social Service, combined with physicians from Guam Memorial Hospital and such other specialists as would need to be recruited to form a group.

The possibility of providing medical services through subcontracts with various existing group practices and solo practitioners seems infeasible. The physicians on Guam do not appear to have well-developed patient referral

patterns and they may not have an effective process for peer review. It appears that the complexities of administration might thus outweigh any possible advantages of this approach.

The utilization of Guam Memorial Hospital physicians along with other specialists to be recruited might be workable, but would be undesirable in that it would tend to promote further duplication of services and facilities on the Island since it would be necessary for the group to begin performing many of the preventive health care services already being performed by Public Health physicians and their allied health professionals.

The recruitment of an entirely new group of physicians appears to be undesirable since it would undoubtedly lead to further duplication of services and facilities, and might also produce an overabundance of physicians on the Island.

A group could be formed most readily through a combination of the existing manpower, facilities and support services of the Division of Public Health and the physicians now employed at the Hospital, augmented by recruitment of a few specialists to provide specialty care.

This last approach would overcome much of the fragmentation and competitive duplication of service now evidencing itself on Guam and is the only recommended approach. However, it would necessitate complete reorganization of the Department of Public Health and Social Service as well as major reorganization of Guam Memorial Hospital. If reorganization of this magnitude is not considered acceptable, it may not be possible to establish a group practice necessary to serve the HMO.

If the recommended approach is adopted, it would also be possible for the new group to offer medical care to patients not enrolled in the HMO and to continue to provide the Government with services which, by policy, are deemed to be public responsibilities, on contract. Such contractual services might include:

- Sanitary inspections and environmental monitoring
- Communicable disease detection and control
- Partially federally-funded programs such as maternal health and community mental health
- Care for patients suffering from diseases for which health care services are free (Tuberculosis, Amyotrophic Lateral Sclerosis, Parkinsonism-Dementia, and the like).

FINANCING

The HMO should endeavor to be self-supporting. However, governmental subsidy for start-up costs and some subsidization to cover the unavoidable inefficiencies of its first year of operation may be necessary.

For the foreseeable future, both operating units of the HMO - the hospital and the group practice (not the HMO itself) - should maintain a broad economic base, providing service to non-enrollees and providing certain previously discussed health care services to the Government of Guam on a contractual basis. This is particularly important since, as will be discussed later, it would be desirable to begin marketing HMO enrollment on a limited basis which would not be adequate to support an entire multi-specialty group practice.

Basic to the concept of the HMO is flat rate prepayment for health care services by enrollees. However, in the absence of adequate actuarial data concerning the population of Guam and its utilization of health care services, it would not be possible to estimate an appropriate flat rate with precision until some operating experience has been gained. Therefore, it may be necessary initially to utilize an approximate flat rate for marketing the program and for the Government of Guam to assume the risk of under-estimation.

Through economies of scale and more organized delivery of health care services, the HMO might well be able to provide broader services than are now generally available at a cost to enrollees approximately equivalent to the prevailing cost of conventional health insurance on the Island.

Under the HMO concept, the flat rate paid by enrollees is used to pay physicians on a capitation basis. That is, a certain amount of money is set aside for physician services and hospital services. At the end of the contract year, unexpended funds are then available for distribution, in part, to the physician group (whose members normally are salaried with incentives for productivity and arrangements for sharing of surpluses) and, in part, for capital improvements and to support future operations.

The cost of hospital services could be paid directly out of monies set aside by the HMO for that purpose. However, particularly during early years of operation, the financial risk involved may be unduly high. Therefore, until enough enroll in the HMO to provide adequate spreading of the risk (perhaps 30,000 or more under coverage), the HMO should purchase hospitalization insurance for its enrollees. The premiums for the hospitalization insurance should, however, be rated separately for those covered by the HMO. That is, if HMO patients do, in fact, experience a lower frequency and duration of hospitalization than do patients of public clinics or private practitioners (as is usually the case with HMOs), the HMO should be able to purchase hospitalization insurance at a reduced rate.

Providing regular hospital insurance (not specially rated) seems disadvantageous in that it would provide no financial incentive for the HMO to control hospital utilization. It should be noted that the principal cost savings attributable to successful prepaid plans arise out of their ability to lower hospital utilization dramatically.

It is recommended that the principle of free choice be maintained in marketing the plan (as is the case with virtually every other such plan). That is, whenever enrollment in the plan is offered to any group of potential members, each member should have the option of participating in conventional health insurance instead. If the HMO is successful in achieving its proposed purpose, alternative forms of health care may, however, become non-competititve. The option of requiring health maintenance organization enrollment appears to be undersirable in that it would cause severe dislocations in the existing health care structure and would remove the incentive of competition.

Until experience has been gained in operating the plan, it would be desirable to limit marketing efforts to well-defined groups of potential enrollees. Given the traditional role of the Government of Guam and the Hospital in providing health care on the Island, and assuming competitive rates, marketing of the plan should be relatively easier on Guam than would be the case on the mainland.

Initial efforts should be directed toward marketing to employees of the Government of Guam. After that, large civilian employee groups, small employee groups, federal Civil Servants (as an approved option under the Federal Employees Health Benefit Law), and finally, individual enrollees should be approached. Concurrently, the Government of Guam should undertake subsidization (in full or in part) of HMO premiums for the medically indigent and low income groups. This would enable the Government to achieve the economies of providing care through an HMO for those patients for whom it now assumes a large portion of the cost of care. The option of direct payment to the health care providers, by the Government, without going through the HMO structure, is not desirable in that the previously mentioned economies would not be available. Also, it might be difficult, under the Organic Act, for the HMO to acquire capital funds through bond issues.

ADMINISTRATION

Operation of a health maintenance organization necessarily entails a number of administrative tasks, including:

- Actuarial determinations of premium rates
- Authorization of payments to providers of physician and hospital services

- Enrollment and membership record-keeping

- Accounting and financial management

- Record-keeping and statistical analysis

- Marketing services

- Public relations.

There are two basic approaches by which the HMO could undertake these administrative activities.

- It could develop an organization to perform all of the necessary tasks.

- It could maintain a very small organization of its own and contract for the vast majority of administrative services.

In view of the shortage on Guam of highly skilled administrative personnel with appropriate experience in actuarial science, health care finance, marketing and data processing, the second avenue appears most reasonable. This would be of particular importance during the early period of operation when the substantial funds required to initiate the administration of the plan may not be available.

The Board of the HMO would, however, require some staff support to coordinate the activities of the hospitalization, medical service and support service contractors and to assist the Board in evaluating the contractors' effectiveness and arriving at appropriate policy determinations. For this reason, it would be necessary to employ at least one administrator to be supported with a small clerical staff.

* * * * *

In brief, should the Board of Guam Memorial Hospital elect to pursue establishment of an HMO, the recommended plan would possess the following key characteristics:

- It would be governed by a public benefit corporation (or "authority") established by the Government of Guam, with a Board appointed by the Government.

- Hospital services would be provided by Guam Memorial Hospital. The HMO would provide hospitalization insurance for its enrollees.

- Medical services would be provided by a self governing group practice of physicians (supported by allied health professionals) on contract to the HMO. It would be made up of the present Division of Public Health, the physicians on full time contract to the Hospital and a small number of newly recruited specialists.

- An administrator of the HMO would have overall responsibility for operation of the HMO, but all administrative support services would be performed by outside contractors.

- Enrollment in the plan would be available on an optional basis to various groups of individuals. The Government would subsidize the premium payments for the medically indigent and low income groups of enrollees.

The basic organizational relationships of the HMO are shown in the exhibit on the following page.

TERRITORY OF GUAM

PROPOSED ORGANIZATION FOR A HEALTH MAINTENANCE ORGANIZATION