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**A STUDY OF FACTORS INFLUENCING PRODUCTIVITY IN THE
OBSTETRICS AND GYNECOLOGY OUTPATIENT CLINIC AT
WALTER REED ARMY MEDICAL CENTER**

**A Graduate Management Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Health Administration
by
Captain John P. Collins, MS
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ABSTRACT

The Obstetrics and Gynecology Outpatient Clinic at Walter Reed Army Medical Center has experienced a trend of decreasing output, periodic patient complaints, and management concern about the Clinic's efficiency and effectiveness. The purpose of this study was to conduct an operational review of the Obstetrics and Gynecology Outpatient Clinic at Walter Reed Army Medical Center to gain an understanding of clinic operations, to evaluate factors influencing productivity, and to make recommendations for improving productivity. The methodology used for conducting the operational review was a five part analysis consisting of an organizational analysis, staffing analysis, workload analysis, scheduling and patient appointment system analysis, and a facility analysis. The study found that while many systemic factors impede the Clinic's level of productivity, the major barrier to productivity improvement is the absence of a clearly defined strategy for improving productivity. Hence, among other specific recommendations, this study recommends implementing a leadership strategy that creates an environment for enhanced productivity.

CHAPTER I - INTRODUCTION

Conditions Which Prompted the Study

Peter Drucker (1991) recently called for a new productivity revolution among knowledge and service workers in the United States. According to him, the productivity revolution sparked by Frederick Taylor in 1881 has run its course in the traditional manufacturing and agricultural industries. In today's developed nations, only one-fifth of the workforce is employed in actually making things. As service and knowledge workers continue to make up a larger part of the workforce, domestic and international competitiveness will become more dependent on the performance of these workers. Drucker believes that the chief economic priority and most important social challenge facing developed countries is that of raising the productivity of service workers. In fact, he states "Unless this challenge is met, the developed world will face increasing social tensions, increasing polarization, increasing radicalization, possibly even class war."

The health care industry is a service industry that employs both the knowledge and service workers that Drucker refers to. As health care costs in this

country continue to escalate and the issue of health care reform gains visibility among politicians, managers of health care delivery must face the issue of productivity. In the past, particularly with the onset of prospective payment, hospital administrators searched for ways to cut costs to maximize reimbursement. Today, with the increased pressure for improved access, high quality, and low costs from both patients and employers, health care managers must find ways of delivering care more efficiently and effectively in an environment of dwindling resources.

The military health care system faces an enormous challenge in continuing to provide high quality, low cost services to its beneficiaries. As society calls for a smaller military force and the defense budget shrinks, the Department of Defense will more closely scrutinize the practices of the military health care system which have been virtually unquestioned for decades. Even the global issue of how the military delivers health care is being challenged. As the Department of Defense Assistant Secretary for Health Affairs attempts to implement his Coordinated Care Plan (released January 8, 1992), some Congressman debate that the CHAMPUS Reform Initiative is a more cost

effective way of doing business. The message is clear - the military health care system is no longer a "special" entity that can merely demand more resources because of the unique aspects of patient care.

As society demands its "peace dividend" from government and the Congress, in turn, more closely scrutinizes the military health care system, so too must military health care leaders scrutinize the delivery of care in each of their military health care facilities. First, leaders must reexamine their strategic plan and planning process. All employees should understand and be committed to the organization's mission, values, goals, and objectives. After the development of the organizational direction, top management must evaluate the types of services it offers in light of the mission statement, resources available, and past performance. In some cases, leaders may decide to reduce or eliminate services offered, contract out certain services, or coordinate services with other institutions. The services that remain in place will be those needed services that are highly productive, that is, producing a high level of output relative to the resources invested. With the military health care system's

venture into coordinated care, the emphasis on cost containment, and the increasing questions about the cost-effectiveness of Graduate Medical Education (GME), leaders of all clinical departments should be concerned about the productivity of their work centers.

In the military, one of the most heavily used work centers is the outpatient clinic. DOD-wide, there were about 23.1 million outpatient visits to military facilities in fiscal year 1987 (GAO Report, 1989). Georgoulakis (1990) stated that military outpatient expenditures were expected to increase from almost \$2 billion in 1984 to over \$3 billion in 1990.

In the civilian sector, a dramatic increase in the demand for outpatient care has occurred in the past few years. According to an AHA Hospital Panel Survey, hospital outpatient visits increased 32 percent from 232.8 million in 1984 to 308.1 million in 1989. During the same period, outpatient revenues grew from 14.4 percent of total patient revenues to 21.1 percent of total patient revenues. (Eubanks, 1990). Hospital Chief Executive Officers predict that by the year 2000, almost half of hospitals' net patient revenues will come from outpatient services. (Anderson, 1991).

Military health care managers should be concerned

about outpatient clinic productivity. As the military health care system transitions to a DRG-type system and with the introduction of improved technology, the emphasis will be to provide more services on an outpatient basis. In an environment of shrinking resources, outpatient work centers will have to operate at maximum efficiency to deliver a high quality of care to its beneficiaries. With the introduction of coordinated care, outpatient work centers that operate less efficiently than other military or civilian work centers may find their centers being closed down and contracted out.

Another incentive for improving outpatient clinic productivity is the current state of patient dissatisfaction with outpatient care delivery in military health care facilities. Piper (1990) states that many patients complain about the inability to get an appointment within a reasonable time, the long waiting time to see a physician once in the clinic, the lack of communication from the clinic staff, and the poor attitude among clinic staff.

As Drucker (1991) challenges us to improve the productivity of our knowledge and service workers, the underlying task is to gain an understanding of the

factors which impact their productivity. In an outpatient clinic, productivity and patient satisfaction is related, directly or indirectly, to factors such as the organizational structure, staffing, workload, scheduling, patient appointment systems, space utilization, communication, and leadership.

Walter Reed Army Medical Center (WRAMC) is the Army's largest medical treatment facility. As a 1280 bed teaching hospital located in northern Washington D.C., WRAMC provides health services to a large population of active duty, retired, and dependent military beneficiaries from all services. It also serves as a tertiary referral center for other military medical treatment facilities throughout the world. In Fiscal Year (FY) 91, with a workforce of over 6,000 and a budget of more than \$200 million, WRAMC recorded 26,594 admissions and 1,112,439 clinic visits (including outlying clinics). These figures equate to an average daily census of 647.5 beds occupied and 3,047.8 daily clinic visits. (WRAMC FY 91 Command Performance Summary).

As the military health care budget shrinks and WRAMC receives fewer resources to do its mission, the WRAMC Commander will have to make difficult strategic

decisions about each work center. Inevitably, the decision to continue funding a product line will depend heavily upon that work center's level of productivity. Hospital administrators and physician managers, in all departments, will be challenged to understand and improve productivity in their work centers. As major work centers, WRAMC's more than 65 outpatient clinics will have to demonstrate a high level of productivity to justify continued funding of their operations.

In recent months, top management has been concerned about a trend of declining workload and periodic patient complaints in the OB-GYN outpatient clinic. From FY 90 to FY 91 the total number of clinic visits decreased from 35,301 to 31,341 resulting in a net decrease of 98.7 ambulatory workload units. Midway through FY 92, the clinic visits are continuing on a downward trend from FY 91. The Chairman of the OB-GYN Department and the clinic staff are also concerned about the productivity of the clinic and have been attempting to improve clinic operations.

Statement of the Management Problem

The OB-GYN Outpatient Clinic at Walter Reed Army Medical Center has experienced a trend of declining output, periodic patient complaints, and management concern about Clinic productivity. This trend has prompted the need for the conduct of an operational review of the OB-GYN clinic to evaluate factors impacting productivity and to make recommendations for improving productivity.

Literature Review

In the last decade, health care executives have become increasingly concerned about improving productivity in their organizations because of many factors including (a) the shift from a cost-based to a prospective payment system, (b) increased competition, especially from managed care organizations, (c) increased demands for high quality, low cost care from patients, employers, and third party payers (Hames, 1991).

While productivity improvement has been viewed as an approach to ensure organizational viability, its importance is put in even broader terms by management guru, Peter F. Drucker. Drucker (1991) claims that

those countries which succeed in raising the productivity of knowledge and service workers will be the countries that dominate the twenty-first century economically. In his opinion, it is time for a productivity revolution in knowledge and service work.

Hospitals, which are service organizations consisting of both knowledge and service work, have become hugely capital-intensive because of new technologies. However, unlike the manufacturing industries, capital is not a "factor" of production, but a "tool" for production. The end result has been more people, more investment, and higher costs in service organizations such as hospitals (Drucker, 1991).

Drucker's solution for achieving a productivity revolution in knowledge and service work consists of a five-step approach in which managers (a) define the task, (b) concentrate work on the task, (c) define performance, (d) make employees a partner in productivity improvement, and (e) build continuous learning and continuous teaching into the job of every employee and work team.

In defining the task, managers must pose questions such as "What is the task?" and "Why do it at

all?". By defining the task and eliminating what doesn't need to be done, great productivity gains can be made.

Drucker states that most knowledge and service workers are being forced to do a growing number of activities that splinter their attention from the primary task. By concentrating work on the defined task, knowledge and service workers will maintain job satisfaction by doing what they are qualified and paid to do. Drucker refers to the job of nursing which includes a growing number of activities that have little to do with patient care.

Productivity improvement efforts must involve input from the worker. This concept is particularly necessary in knowledge work because the worker's knowledge is the primary source for understanding the work. In Drucker's opinion, management must "build responsibility for productivity and performance into every knowledge and service job regardless of level, difficulty, or skill".

Altman, Goldberger, and Crane (1990) call for a national focus on health care productivity. Altman et al. agree with Drucker (1991) that improved technology has made the health care industry more labor intensive

and has added further to the cost of health care. Throughout the 1980s, hospitals implemented a variety of cost containment strategies in response to the introduction of a prospective payment system. However, cost cutting strategies, competition, and service delivery innovations have not resulted in more efficient organizations.

Health care administrators may have reached a limit of savings that can be obtained through such things as shortened stays and improved scheduling of procedures. Altman et al. believe that administrators will only sustain productivity improvements by fundamentally rethinking about how work is organized. However, because most administrators are so entrenched in the daily operations of the organization, they are often tempted to implement short-term solutions rather than study staffing policies or work environments. Thus, administrators need outside help to get ideas for improving productivity.

According to Altman et al., the federal government, together with the private sector, must begin a national effort to conduct research and develop solutions for improving health care productivity. This effort should include activities such as

(a) comparative analysis of domestic and international health care systems, (b) analysis of barriers and constraints to productivity, and (c) teamwork training between administrators and clinicians regarding efficiency improvement.

Rowland and Rowland (1984) identify the factors leading to decreased productivity in health care as (a) inflation in salary, supply, and other operating costs leading to increased input costs, (b) more complex medical practices resulting in a greater intensity of services being required for a given diagnosis, (c) increasing fringe benefits for workers without a proportionate increase in outputs, and (d) patient demand for more services, resulting in increased input costs relative to output levels.

The term "productivity", in its most basic form, is defined as output divided by resource inputs (Eastaugh 1985). Productivity can be improved by either increasing outputs, decreasing inputs, or doing both. While output may include such things as clinic visits, procedures performed, or live births, inputs may include budgets, staffing levels, education, and research. This output/input definition is the traditional way of viewing productivity. However, some

authors contend that productivity must be viewed in broader terms.

Gilbert (1990) believes that a redefinition of the word "productivity" is essential to the success of any health care organization's attempt to improve productivity. This new way of looking at productivity must be one that expands the traditional view (doing more with less) to include the importance of individuals and work groups working together. According to Gilbert, the relationship between output and input is a quantitative definition of productivity which he calls "technical productivity".

Technical productivity is only one part of Gilbert's "more complete" definition: "Productivity is individuals and work groups working in coordinated action, performing their work efficiently (with technical productivity) and effectively (with quality), forwarding the vision and commitment of the organization and their profession, while making a difference in their work environment." Gilbert's main point is that productivity improvement not only shows up as improved efficiency, but also as improved effectiveness, communication, and satisfaction.

The expansion of the definition of productivity to

include the concepts of effectiveness, quality, and satisfaction is also espoused by Sahney and Warden (1989) who claim "productivity has been defined narrowly by economists as a ratio of output to input". Sahney and Warden define productivity as the "quality, timeliness, and cost-effectiveness by which an organization achieves its mission." They contend that when quality of services and clinical effectiveness improve so does productivity.

Budd (1988) states that the five basic types of inputs involved in the production of health care are (a) labor, (b) supplies, (c) equipment, (d) facilities, and (e) capital. Because of the labor-intensive nature of hospitals, most productivity improvement efforts have focused on the productivity of labor. Budd suggests that in managing productivity two types of information should be monitored: (a) the trend in the ratio of inputs to outputs, and (b) the comparison of the actual ratio of inputs to outputs to the expected ratio or standard.

Bennett (1983) views productivity as a system which can be defined as a single entity containing "a set of units or elements that are actively interrelated." In his opinion, the systems approach to

improving productivity is the only way to "harness the controllables" and maximize the use of resources. When productivity is viewed as a system, several concepts become clear to include (a) the idea of thinking first of all about the goals of the organization, (b) the idea of looking at relationships between components instead of at the components themselves, (c) the idea that the productivity system is probabilistic in nature, and (d) the idea of the need for a balance between the quantitative and qualitative dimensions (i.e., efficiency and effectiveness).

Many health care professionals view the whole concept of productivity in a negative context. Middle managers, front line supervisors, clinicians, and other staff often view top management as the enemy trying to squeeze more work out of less people. Some of the typical concerns about productivity include (a) fear of hidden agendas, (b) concern that productivity is an enemy of quality, (c) concern that productivity consultants think they know how to do the job better than the workers and that they care more about numbers than they do about patients and staff, (d) fear of being "found out" as a poor manager, (e) administration that uses productivity tools as a bludgeon, (f) and

prior bad experiences with productivity improvement (Gilbert, 1990). Gilbert suggests that we view productivity in a new light where opportunities exist to provide greater effectiveness and satisfaction, in addition to greater efficiency.

The literature abounds with recommendations for improving productivity in health care organizations. Eastaugh's (1985) recommendations are based on the premise that cost reduction, not output expansion, is the key to productivity improvement. He recommends a three-stage approach for assessing and improving productivity.

Stage One, Operational Assessment, involves finding the answers to the questions "How many people should really be working here?" and "What is the best mix of staff and other resources?". The operational assessment consists of (a) reviewing historical, current, and budgeted staffing levels, (b) evaluating facility layout, equipment, intra-functional relationships, and interdepartmental coordination, (c) identifying operational deficiencies and recommend improvements, and (d) analyzing forms and reports for appropriateness and timeliness of information. (Eastaugh, 1985).

Stage Two, Scheduling, involves finding ways for better scheduling patients, employees, and physicians. By forecasting workload and through the use of automated systems, better scheduling can reduce unnecessary activity flow, unit costs, waiting time for patients and providers, and patient dissatisfaction. Stage Three, Provision of Incentives, involves the implementation of monetary incentive systems that reward employees and work groups for successful cost reduction efforts and improved performance (Eastaugh, 1985).

Sahney and Warden (1989) state that, in order to improve productivity, management must develop a comprehensive approach that focuses on three key levels: (a) strategic focus, (b) clinical effectiveness, (c) operational efficiency.

Strategic focus, which involves an examination of the organization's goals, policies, and mission statements, is key because any significant management decision ultimately affects organizational productivity. Management's role is to evaluate product mix, individual product line cost, management structure, new product development, and product quality (Sahney and Warden, 1989).

Clinical effectiveness is a level of focus that involves cooperation between physicians and administrators. To reduce costs or control utilization, physicians must be involved since they are the ones who order tests, admit patients, and directly manage patient care. Sahney and Warden (1989) identify the two major areas that will improve clinical effectiveness as information systems and patient care protocols. Information systems must be improved to provide the clinician with accurate and timely data (e.g. test results). Patient care protocols can be improved if physicians dedicate more time sharing information about the optimum way to treat patients.

Operational efficiency is the level of focus that involves the actual performance of individuals and work groups. Sahney and Warden's definition of performance is the following: "Performance = Employee ability x Systems support x Employee effort". Top management's role, in maximizing organizational performance, is to create a working environment in which all three performance factors can achieve target levels.

The concept of productivity in outpatient care has become increasingly important as hospitals begin earning a greater proportion of their revenues from

outpatient care and as technology allows more services to be provided on an outpatient basis. Budd (1988) advises ambulatory service managers to perform an operational review as the first step in measuring and managing outpatient service productivity.

This operational review should include (a) a "functional analysis" of the work being performed to identify redundant or unnecessary tasks, (b) a "facility analysis" to evaluate the appropriateness of the size and layout of the physical space of the clinic, (c) a "material analysis" focusing on the supply distribution system, supply inventory levels, and the adequacy and maintenance of equipment, (d) an "organizational analysis" focusing on the roles and responsibilities of individuals and their relationship to workload, and (e) a "staffing analysis" that evaluates staffing in relation to workload and the scheduling of patients and employees (Budd, 1988).

Budd (1988) recommends five techniques for improving productivity in outpatient services: (a) improved scheduling of patients, staff, and physicians, (b) staffing only for current workload, (c) improving functional design of facilities, (d) ensuring employee motivation, and (e) increasing patient volume.

The appointment system is one of the key systems affecting the management of resources and level of efficiency in a health care practice. According to Ross, Williams, and Schafer (1991), appointment systems meet several needs of patients in any ambulatory care practice to include the following: (1) they provide an initial contact point for the new or returning patient; (2) they establish treatment priorities by scheduling patients in response to the urgency of their needs; (3) they match practice resources with patient needs; (4) they assume that patient demands are met reasonably; (5) they provide certain limited information for patients, especially in prepaid settings, that can either alleviate the need for in-person care or can otherwise change patient utilization patterns.

Appointment systems also serve the important function of ensuring the efficient use of physician and other health care provider's time. Overall, appointment and scheduling systems serve the basic function of ensuring that the patient, provider, and other supporting resources needed for an encounter of care are in the same place at the same time. In any case, the simplest system that will work should be implemented, in order to reduce the increased potential

of error that accompanies more complex systems.

(Ross, Williams, and Schafer, 1991).

The patient appointment system is an important system impacting productivity and patient satisfaction in a medical treatment facility. In an article about patient appointment systems in United States Air Force Hospitals, Brandler (1983) suggests that appointment systems should be analyzed in terms of two major components: the appointment desk operations and appointment availability.

Historically, appointment system problems have typically been addressed by analyzing the telephone system, installing automated appointment/scheduling systems, and switching to centralized systems. However, Brandler contends that appointment availability is a reflection of provider staff availability, employee productivity, and a commitment to meeting patient health needs. Brandler's suggestions for better patient scheduling are the following: (1) base appointment lengths on purpose of visit; (2) conduct meetings at times not in conflict with prime patient care time; (3) schedule no further in advance than necessary; (4) schedule follow-up visits before the patient leaves the clinic; (5) offer

evening or weekend clinics; and (6) offer same-day service for acute care problems.

As one can see from a review of the literature, productivity is a management indicator of performance potentially consisting of multiple inputs and outputs. In an environment of increasingly constrained resources, health care managers must have models with which to assess and improve productivity, especially in the rapidly growing arena of outpatient care. If, as Drucker claims, it is time for a productivity revolution among knowledge and service workers, health care managers must concentrate on creating a work environment that encourages the participation of all workers in the productivity improvement process.

Purpose

The purpose of this study was to conduct an operational review of the Obstetrics and Gynecology Outpatient Clinic at Walter Reed Army Medical Center to understand clinic operations, to evaluate factors influencing productivity, and to make recommendations for improving clinic productivity.

CHAPTER II - METHODS AND PROCEDURES

This project was conducted as a case study in which several factors impacting productivity were examined. The methodology consisted of an operational review of the OB-GYN Clinic. As Budd (1988) states, the purpose of the operational review is to "provide a comprehensive analysis of a specific department, area, or free-standing entity". This operational review consisted an organizational analysis, a staffing analysis, a workload analysis, a scheduling and patient appointment system analysis, and a facility analysis.

In the organizational analysis, the first task was to become familiar with the clinic as an organizational entity. The clinic's mission, goals, organizational structure, and types of services were examined. This task was accomplished through a review of Walter Reed Army Medical Center's "Organization & Function Manual" (WRAMC Regulation 10-1), the Table of Distribution and Allowances (TDA), Clinic policy and procedure documents, the OB-GYN Department's strategic plan and interviews with clinic staff. In addition, interviews were conducted with the Chief of the Department of Obstetrics and Gynecology, the Chief of the OB-GYN Clinic, clinic physicians, nurses, and support staff.

In the staffing analysis, staffing levels in the clinic were analyzed by reviewing the current TDA, the last Manpower Survey Report (Schedule X), and the new Manpower Staffing Standards (MS3). Interviews were conducted with clinic staff to determine significant staffing issues.

The workload analysis consisted of an analysis of workload and workload reporting procedures in order to identify output trends and gain an understanding of reporting procedures. Medical Expense and Performance Reporting System (MEPRS) data, clinic productivity reports, and interviews with clinic staff were utilized to assess output levels for use in conducting trend analysis.

In the scheduling and patient appointment systems analysis, the clinic schedule was reviewed to gain a better understanding of its relationship to the patient appointment system. Personnel who prepare the clinic schedules were interviewed to gain an understanding of the scheduling process. The patient appointment system was analyzed to determine the type of appointments scheduled, the time allotted for each appointment, and the method of scheduling appointments. Patient appointment statistics were examined for a one

month period to determine no-show rates, cancellation rates, percentage of walk-in patients, and average waiting times to get an appointment. Interviews were also conducted with the Director of Patient Appointment Systems, the clinic's Supervisory Administrative Coordinator (SAC) and other clinic staff to gain further insight.

In the facility analysis, the physical layout of the clinic was examined to evaluate its overall impact on productivity. In this analysis, the author determined the room-to-provider ratio and evaluated the clinic layout in terms of patient flow. This process was conducted by personally observing the process and by interviewing clinic staff about the process. The author also evaluated the space capacity in the reception area and general aesthetics of the waiting room. According to Joyce (1989), a comfortable and aesthetically pleasing environment reduces physical and psychological stress and contributes to job performance. Interviews with clinic staff were important to gain an understanding of room assignments and utilization.

This paper is organized so that narrative descriptions of clinic operations and results of data

analysis are presented in Chapter III, "Operational Review". A further discussion of the data and significant issues impacting productivity are presented in Chapter IV, "Discussion". The author's conclusions and recommendations are contained in Chapter V, "Conclusion and Recommendations".

CHAPTER III - OPERATIONAL REVIEW

Organizational Review**Mission, Goals, and Function**

Through interviews with clinic staff, the author learned that the mission of the OB-GYN Clinic is to provide outpatient obstetrical and gynecological care to eligible female beneficiaries. As part of a teaching hospital, the clinic also provides an outpatient care setting for training physicians in the diagnosis, care, and treatment of obstetrical and gynecological patients.

The researcher did not find a mission statement for the clinic itself, but found that mission statements for the OB-GYN Department are listed in WRAMC Regulation 10-1 ("Organization and Function Manual", dated 1 March 1985) and the OB-GYN Department's "Mission and Goals Template". According to WRAMC Regulation 10-1, the mission of the OB-GYN Department is "to provide diagnosis, care, and treatment to all female patients commensurate with the highest standards of quality patient care."

The OB-GYN Department's "Missions and Goals Template" lists several missions, goals, long-term and short-term objectives for the whole department. The

five missions listed are the following: (1) "provide diagnosis, care, treatment, and appropriate disposition of patients with obstetrical or gynecological diseases"; (2) "provide graduate and undergraduate medical education in the field of obstetrics-gynecology"; (3) "provide post-residency fellowship training in the sub-specialties of obstetrics and gynecology"; (4) "conduct clinical and laboratory research related to obstetrics and gynecology"; and (5) "provide support for military readiness".

According to the "Missions/Goals Template", the OB-GYN Department's four goals are (1) "maintain and enhance physician and non-physician staff", (2) "maintain residency program quality and accreditation", (3) "maintain current equipment and instruments in good working condition, and maintain state-of-the-art capabilities for patient care by acquisition of modern equipment and capital facilities", and (4) "increase the quality of medical student education in obstetrics and gynecology".

The OB-GYN Department has sixteen long-term objectives and thirteen short-term objectives for accomplishing its goals. The majority of these objectives focus on the outpatient clinic. For

example, the long-term objectives include "improve patient satisfaction with care in the OB-GYN Clinic" and "eliminate stovepiping in Clinic". The short-term objectives include "fill unfilled nursing positions in Clinic", and "establish evening Clinic hours".

WRAMC Regulation 10-1 lists the basic functions of the OB-GYN Outpatient and Consultation Service (i.e., OB-GYN Clinic) as (a) provides weekly well patient clinics for the detection of gynecological diseases, benign and malignant, (b) maintains 24 hour per day OB-GYN consultation services to other clinical departments, (c) evaluates outpatient medical care and records, (d) provides professional training of assigned personnel, and (e) prepares and submits records and reports to the department.

In addition to the functions listed in WRAMC Regulation 10-1, the clinic conducts several specialty clinics for patients with various obstetrical and gynecological problems. Because WRAMC is a tertiary referral center, there is a wide variety of complex patients referred to the clinic for problems which include gynecologic oncology, infertility, and high risk obstetrics.

Overall, the missions, goals, and functions of the

Clinic revolve around the three areas of patient care, graduate medical education, and research. While several of the goals involve improving the Clinic's efficiency and effectiveness, a fundamental leadership strategy for improving the Clinic's productivity seems to be lacking.

Organizational Structure

The Obstetrics and Gynecology (OB-GYN) Outpatient Clinic is one of the Department of Obstetrics and Gynecology's six major services which include Obstetrics, Benign Gynecology, Gynecologic Oncology, Endocrinology/Infertility, Family Planning, and Ambulatory Care/Consultation (OB-GYN Clinic).

The OB-GYN Clinic is organized like most outpatient clinics with three interdependent groups of personnel: physicians, nursing staff, and administrative support personnel. While lines of communication and coordination exist between these groups, the performance rating schemes of clinic staff are organized along traditional functional lines. Hence, there is no official linkage between each of the functional groups.
(see Figure 1).

Insert Figure 1 here

Key management personnel within the clinic include the Clinic Chief, the Head Nurse, the Supervisory Administrative Coordinator (SAC), and the Noncommissioned Officer In Charge (NCOIC). The clinic chief is an OB-GYN physician who is one year removed from having completed her OB-GYN residency at WRAMC. Historically, the clinic chief position has been a position filled by an OB-GYN physician with relatively little management experience. As a physician manager, the Clinic Chief has responsibility for the daily clinical and management aspects of the clinic. However, the Chief of the OB-GYN Department and Administrator for the Department control the budget and set the strategic direction for the clinic. Within the clinic, the Head Nurse, SAC, and NCOIC manage the nursing, administrative, and logistical support functions.

As Figure 1 shows, the Clinic Chief has formal performance rating responsibility for the Clinic Secretary, but not for the Head Nurse, SAC, or NCOIC .

The Head Nurse's performance is evaluated by the Chief Nurse of Maternal and Child Health and the Deputy Chief of the Department of Nursing. The SAC's performance is evaluated by the Administrator of the OB-GYN Department and the Chief of the OB-GYN Department. The NCOIC is evaluated by the Head Nurse of the clinic and the NCOIC of the Maternal and Child Health Section (Department of Nursing). In addition, a medical supply specialist, who is assigned to and rated by the Hospital Logistics Division, provides area logistical coverage to the clinic.

The reporting relationships between clinical staff and functional departments seems to be a concern of the Chief of the OB-GYN Department. In his view, this "stovepiping" of personnel is a factor that negatively impacts the management of clinic operations and productivity.

The clinic's nursing staff consists of a Head Nurse (Registered Nurse), two licensed practical nurses (LPNs), and six civilian nursing assistants. Two enlisted medical specialists from the Department of Nursing also serve as nursing assistants. The nursing staff are all full-time employees that are present in the clinic eight hours per day, Monday through Friday.

The administrative support staff consists of a Supervisory Administrative Coordinator (SAC), the NCOIC, two front desk receptionists, an exit clerk, the Clinic Secretary, and the secretary for the Chief of the GYN Oncology Service.

The number of physicians working in the clinic varies depending upon the clinic schedule, but all of the OB-GYN staff physicians, residents, fellows, and interns see patients in the clinic. Currently, the physician manpower of the OB-GYN Department consists of seven military staff physicians, two civilian staff physicians, ten residents, nine clinical fellows, four interns and one CHAMPUS partnership provider. In addition, transitional interns rotate through the clinic to see patients.

Types of Clinics

The OB-GYN Clinic provides many services, ranging from routine to highly specialized, that fall under two major types of care, obstetrical services and gynecological services. While the clinic's general operating hours are from 0800 hours to 1630 hours, Monday through Friday, a variety of subclinics are held at different times throughout the week. These subclinics are described below.

1. Obstetrical Clinics:

a. New OB Clinic: This initial clinic visit is provided for all new OB patients once pregnancy is confirmed. During this three hour clinic, patients are provided with the following: (1) orientation to obstetrical care at WRAMC; (2) lectures on prenatal health care by the head nurse, dietitian, and physical therapist; (3) a routine blood work-up at the laboratory and dental hygiene exam at the dental clinic; (4) literature on prenatal health care. This clinic is held on Wednesday from 0800 to 1200 hours.

b. Follow-up/Return OB Clinic: This clinic is provided for routine and complicated OB patients. Routine patients are generally scheduled at four week intervals up until 36 weeks. After 36 weeks, these patients are usually scheduled every week until delivery. This clinic is held on Monday mornings (0800-1200), Tuesday mornings (0800-1200, complicated OB patients), Tuesday afternoons (1300-1600, routine OB patients), and Friday mornings (0800-1200).

2. Gynecology Clinics:

a. GYN Type I Clinic: This clinic is provided for routine gynecology exams (pap smear, pelvic, and

breast exam) and the provision of contraception to those requesting it. This clinic is for the well woman. This clinic is held throughout the week, Monday through Friday, from 0800 to 1630 hours.

b. GYN Type II Clinic: This clinic is for the patient with gynecologic problems not falling into the area of infertility or GYN cancer. Patients for preoperative evaluation and post operative follow up are also seen in this clinic. This clinic is held on Tuesday and Thursday afternoons from 0800 to 1630 hours.

c. Colposcopy Clinic: This clinic is designed for the evaluation and treatment of patients with abnormal pap smears and cervical and vaginal problems. A colposcope is an instrument that magnifies and illuminates the cervix so that physicians can examine the cervix and surrounding tissue. In some cases, biopsies are performed to check for cancer. This clinic is held on Wednesday and Friday afternoons from 0800 to 1630 hours.

d. Sterilization/Norplant: These clinics are educational sessions held for the patient seeking permanent sterilization or norplant implementation. Norplants are placed at subsequent visits. The

Sterilization Class is held the first Monday of the month at 1300 hours. The Norplant Class is held the 2nd Monday of the month at 1300 hours.

e. Subspecialty Clinics: These highly specialized clinics provide evaluation and treatment for oncology patients, and new and return infertility patients. The Gynecology Oncology clinic is held on Thursday at 1300 to 1630 hours. The New Infertility Clinics are held on Tuesday from 1200 to 1630 hours. The Return Infertility Clinics are held on Monday, Tuesday, and Thursday mornings from 0800 to 1130 hours.

f. Post-Partum Clinic: This clinic is designed for the six week exam after delivery. Often times, contraceptive methods are initiated or re-established. This clinic is held on Wednesday from 0800 to 1630 and Friday afternoon from 1300 to 1630 hours.

3. Walk - In Clinic: This clinic is designed for OB or GYN patients that have a legitimate OB-GYN emergency and must be seen the same day. This clinic is held on Monday, Wednesday, Thursday, and Friday from 0800 to 0900 and from 1300 to 1400 hours. On Tuesday, this clinic is held from 0900 to 1000 and from 1300 to 1400 hours.

4. Consults (72 hours): This clinic is

designed for referral patients that must be seen within 72 hours. The Chief Resident is responsible for seeing these patients. This clinic is held on Mondays from 0800 to 1630 hours and on Wednesday from 1300 to 1630 hours.

Obviously, the OB-GYN Clinic offers a variety of different specialty services. This complexity and specialty mix provides for a significant managerial challenge with regards to maximizing productivity from each of these diverse but interrelated entities.

Graduate Medical Education

An additional mission of the OB-GYN Clinic is to support the graduate medical education of physicians specializing in obstetrics and gynecology. The staff of this OB-GYN residency program includes the Chairman of the OB-GYN Department, a Program Director, five additional fulltime faculty members and three part-time faculty members. The subspecialties of Maternal Fetal Medicine, Reproductive Endocrinology, and Gynecologic Oncology are represented by two faculty members each. In addition, there are two OB-GYN (generalist) faculty members.

For the 1991-1992 academic year, there are ten residents (three third year residents, three second

year residents, and four first year residents) and four interns in the program. In addition, there are nine clinical fellows (four GYN Oncology and five GYN Endocrinology) pursuing subspecialty gynecological training. An important part of their training is to engage in the diagnosis, treatment, and care of obstetrical and gynecological patients in the outpatient setting.

The impact of graduate medical education at WRAMC must be considered when examining productivity. As in most teaching hospitals, residents at WRAMC provide most of the actual care given to beneficiaries. Since they see more patients, order more tests, and consume more resources, residents must be educated about fundamental productivity concepts and be committed to the organizational goals.

Staffing Review

Staffing Level

The WRAMC "Working Table of Distribution and Allowances" (TDA) (dated March 16, 1992) reflects a total authorization of 18 personnel for the OB-GYN Clinic with 20 currently assigned. The staffing mix authorized and currently assigned on the Working TDA is

shown in Table 1.

Insert Table 1 here

As shown in Table 1, the Chief, OB-GYN Clinic position, which is an authorized position for a Lieutenant Colonel (05) is being filled by a Captain (03). It should also be noted that one of the two civilian physicians (GS14) is only available nine hours per week.

Although the Working TDA lists 20 people as assigned to the clinic, some of the personnel who actually work in the clinic are not assigned to the clinic strength. Hence, the clinic section of the TDA does not account for all of the personnel working in the clinic. For example, the Clinic Secretary is assigned to the Family Planning Service on the Working TDA, but supports the Clinic Chief and the Infertility Service in the clinic. The secretary for the Chief of Gynecology Oncology Service is assigned to the Gynecology Oncology Service and also works in the clinic. The medical supply specialist providing area logistics coverage to the clinic is assigned to the

recently created Hospital Logistics Division.

The CHAMPUS partnership provider, who has an office in the clinic and works 4.5 days of the week in the clinic, is not included on the TDA. The residents, fellows, and staff physicians (except the Clinic Chief) are assigned elsewhere on the TDA. The residents are slotted under the Chief of the OB-GYN Department and under the Gynecology Oncology Service. The staff physicians are assigned to their respective service areas in the department.

While the assignment of people to certain slots may not be significant from a department level perspective, one must gain a true understanding of the workforce when examining productivity issues.

The last Manpower Survey (Schedule X) conducted in the Department of OB-GYN was in 1982. In the Manpower Survey Report, the survey team recommended staffing the clinic with a total of 17 people as shown in Table 2.

Insert Table 2 here

This level of staffing was based on the application of a standard manpower formula applied to the clinic's average monthly visits and a local appraisal. Using a figure of 2784.42 average monthly visits (August 1981 - July 1982), the formula yielded a figure of 7 as the minimum essential manpower requirements.

Through a local appraisal process, the survey team recommended an additional 10 requirements. These 10 additional requirements were arrived at as a net figure resulting from the following recommendations: (a) five additional requirements for staffing GYN visits, (b) two additional requirements for staffing OB visits, (c) seven additional requirements to provide para-professional staffing for fourteen physicians conducting various clinics (i.e., post-partum, oncology, infertility, colposcopy, cryotherapy, and sterilization), (d) three less requirements for OB-GYN physicians who were removed to staff positions in the Office of the Chief, OB-GYN, GYN Oncology, and GYN Endocrinology/Infertility Service, and (e) one less clerk-typist removed because clerical support was already being provided by the Family Planning Services secretary who was working in the clinic. The total of

fourteen additions and four reductions resulted in a net addition of ten requirements.

Currently, there is a moratorium from Health Services Command on conducting the traditional Schedule X because Joint Healthcare Manpower Standards (JHMS) are to become the standard for determining staffing levels in all military health care facilities. In a WRAMC interdepartmental memo (dated 26 Mar 91) the Director of Resource Management stated that the Assistant Secretary of Defense for Health Affairs directed the development of these standards to ensure that peacetime staffing requirements of the Military Health Service System provides quality medical care in a productive environment. Under these new standards, work centers will determine their staffing needs, each year, by calculating a specialty-specific formula with data from the previous 12 months (e.g., number of visits, number of inpatient surgical cases, number of research protocols, etc.).

The "OB-GYN Clinic Standard (DOD 6102-STD)" was applied to WRAMC's OB-GYN Clinic to determine the recommended staffing level. The staffing standard yielded a figure of 39 manpower requirements consisting of 20 providers, 2 clinical nurses, 12 medical

technicians, and 5 administrative support personnel (see Appendix). Obviously, this recommended staffing level is considerably higher than both that currently authorized by TDA and that recommended by the 1982 Schedule X.

Staffing Issues

In the opinion of some of the clinic staff, chaperone coverage is a staffing issue of concern. Due to the gender of the patients, the sensitive nature of the examinations, and Army regulation, it is required that a female chaperone be present during each examination. The nursing staff, primarily the nursing assistants, perform this role. The Head Nurse and LPNs also serve as chaperones, particularly on busy days and during staffing shortages.

Chaperones are assigned to a particular clinic or physician for the day. The nurse assistants rotate chaperone coverage on a periodic basis between the different types of clinics to gain experience in the different types of procedures and care offered in the clinic. This also allows nurse assistants to become familiar with the individual practice patterns of the different physicians.

Nonetheless, even with a prepared schedule, there

seems to be a shortage of chaperones at times due to staffing shortages (i.e. sickness, leave, etc.), or unexpectedly high workload. On most of the days during my observations, several chaperones provided coverage for two physicians simultaneously. On days when the nursing staff was short, some chaperones provided coverage for three physicians. Frequently, a chaperone will be required to assist physicians working in different areas of the clinic. Often times, physicians must wait until one physician is finished with a chaperone to get chaperone coverage. This can be a factor impeding physician and clinic productivity.

A comparison of workload and authorized nursing staffing of OB-GYN Clinics at 6 Army Medical Centers is shown in Table 3. In terms of workload, this general data comparison indicates that WRAMC's OB-GYN Clinic is relatively well staffed in comparison to other medical treatment facilities.

Insert Table 3 here

Roles and Responsibilities

Head Nurse

The Head Nurse oversees the nursing functions of the clinic to include staffing, completion of administrative reports, conducting performance evaluations of nursing staff, conducting weekly meetings with nursing staff, assisting in the screening of emergency walk-in patients and telephone calls, and providing counselling patients. In addition, she makes the 72 hour consult appointments for the Chief Resident.

During an interview, the Head Nurse stated that she had never seen her job description or a list of performance goals. The Head Nurse also felt that the communication between the physicians and the nursing staff could be better. She felt that her views about clinic management were not openly accepted by the medical staff and that her skills as a Registered Nurse were not fully utilized. Nonetheless, she still viewed an important part of her role as that of being a liaison between the OB-GYN Department and the nursing staff.

Licensed Practical Nurses

The Licensed Practical Nurses (LPNs) are responsible for the following: Conducting triage for Walk-in Patients, staffing the "weight room" (collecting urine and recording patient's weight), preparing work/room assignments for the nursing assistants, conducting the New OB and Norplant classes, supervising nursing assistants, dispensing medications, serving as chaperones, and ensuring that rooms are properly stocked with medical supplies and equipment. In the absence of the Head Nurse, one of the LPNs assumes the Head Nurse role.

One of the LPNs, in particular, seemed to be in charge of managing the day-to-day nursing functions of the clinic. In addition to closely supervising the nursing staff, she monitored patient flow and actively managed walk-in patients.

Nursing Assistants

The major role of the nursing assistants is to serve as patient chaperones. The chaperone function involves calling the patient from the waiting room to the exam room, taking the patient's blood pressure, preparing the patient for the physician, ensuring the proper instruments and supplies are

available for a particular type of exam/procedure, being present in the room with the physician and patient during the examination, assisting the physician as necessary, and cleaning the equipment and room after the encounter. The nursing assistants must also ensure that their assigned rooms are properly stocked with medical supplies. The restocking process occurs at various times to include in the morning before appointments begin, in between appointments, during slow periods, and at the end of the day. As a group, chaperones experience a fluctuation in their workload related to the clinic schedule.

Administrative Support Staff

The SAC position was recently developed at WRAMC as part of the reorganization of the medical center's administrative support structure. According to the "Service Chief's Handbook for the Supervisory Administrative Coordinator", the SAC position "provides clinical services with a single point-of-contact for healthcare administration." The SAC is viewed as an office manager who directs the daily administrative activities of the organization. The SAC coordinates personnel management, administrative support service, contracts, budgets, and logistics, and day-to day

administrative support required to accomplish the mission.

In the OB-GYN Clinic, the SAC oversees and evaluates the performance of the front desk receptionists and the exit clerk. The SAC spends a majority of her time on tasks such as booking appointments, coordinating logistical support for the clinic, preparing administrative and ad hoc reports (i.e. workload and appointment statistics), and answering telephones. In addition, the SAC often serves as a front desk receptionist during lunch hours and when staffing shortages exist. Currently, the budget for the clinic is centrally managed by the administrator of the OB-GYN Department. While the SAC works under the daily supervision of the clinic chief, the SAC also receives direction from and is officially evaluated by the administrator of the OB-GYN Department.

Two civilian secretaries, who are physically located in the same office with the SAC, provide administrative assistance (telephone answering, appointment making, typing) for specialty services. One of the secretaries, referred to as the Clinic Secretary, provides administrative support to the

Clinic Chief, maintains appointments and medical charts for the Infertility Service, and maintains the appointment book for the CHAMPUS partnership provider's colposcopy appointments. The Clinic Secretary's performance is evaluated by the clinic Chief.

The other secretary is the secretary for the Chief of the GYN Oncology Service. Her tasks are limited to providing clerical and administrative support to this service chief. Although she is collocated with the SAC and the Clinic Secretary, she does not appear to perform any tasks contributing to the operations of the clinic external to the GYN Oncology Service. Her performance is evaluated by the Chief of the GYN Oncology Service.

There are two receptionists, one military and one civilian, assigned to inprocess patients at the front desk. The military person is a patient administration specialist (E5) with extensive automation expertise and experience with the Composite Health Care System (CHCS). Of the two receptionists, he seemed particularly efficient and customer-oriented in performing his duties. The SAC and the Exit Clerk also fill in at the front desk when needed.

The Exit Clerk is the patient's final point of

contact before leaving the clinic. After the encounter with the physician, the patient must outprocess through the exit clerk before leaving the clinic. The exit clerk verifies records, creates specialty records, fills out lab requests, files lab results, makes follow up appointments, and ensures that the patient understands when and where to go for additional diagnostic testing and future appointments.

The clinic's Noncommissioned Officer in Charge (NCOIC) is responsible for the supervision and performance evaluation of the nursing assistants (two enlisted medical specialists and six civilian nursing assistants), coordination of required logistical and maintenance support for the clinic, and general administrative support of the providers as required. The NCOIC is also cross-trained to perform the initial "weight room" tasks during staffing shortages and peak workload periods. The NCOIC's military occupational specialty is 91B30 (Field Medical NCO). While the NCOIC is a point of contact for handling problems/concerns of the nursing assistants, he is not professionally qualified to provide clinical guidance to the nursing assistants about obstetrical or gynecological care. The NCOIC works under the

supervision of the Clinic Chief and the Head Nurse, but is officially evaluated by the Head Nurse and the NCOIC of the Maternal and Child Medicine Section (Department of Nursing).

To assist in the logistical support of the clinic, an enlisted medical supply specialist from the recently created Hospital Logistics Division provides area supply coverage to the OB-GYN Clinic. Since this supply specialist also provides area coverage to other services, she is only available to provide support to the OB-GYN clinic on a part-time basis. Although the clinic must rely upon the logistics technician for supply support, the SAC and NCOIC still spend a considerable amount of manhours coordinating logistical support for the clinic.

Workload Review

The OB-GYN Clinic, like most DOD outpatient clinics, measures productivity in terms of output. This output consists of a clinic visit. According to the U.S. Army Patient Administration Systems and Biostatistics Activity (PASBA) ("Medical Summary Report User's Manual, 2 January 1985"), a visit is counted each time an eligible beneficiary presents to a

separately organized clinic for examination, diagnosis, treatment, evaluation, consultation, counselling, and/or medical advice. Workload that can also be counted as outpatient clinic visits include (a) each time medical advice or consultation is provided to the patient by telephone, and a DA Form 5008 (Telephone Medical Advice/Consultation Record) is completed and filed in the patient's record, and (b) certain procedures related to previously initiated treatment/examination of a patient for a certain condition (PASBA's approved list includes cancer detection checks, blood pressure checks, weight checks, and therapeutic or desensitization injections).

An important finding concerning workload and productivity overall involves goal setting, productivity monitoring and measurement, and incentives for productivity. Currently, Health Services Command sets workload goals (i.e. programmed workload) for WRAMC overall. However, this expected workload is not further allocated among work centers at WRAMC. The OB-GYN Clinic, like other work centers, monitors productivity by reviewing the monthly workload report. The primary concern of the OB-GYN Department leadership is that monthly workload is at least at the level of

the same month of the previous year.

Through discussions with clinic and department level staff, it does not appear that clinic goals or provider specific goals are set for workload or productivity. Incentives for being more productive are also lacking. Although a higher number of visits would translate into a greater supply budget, the incentive is not meaningful to the individual provider.

Workload Trends

An analysis of the OB-GYN Clinic's monthly workload was conducted for fiscal years 1990, 1991, and 1992 (through February 1992). The Directorate of Resource Management's Workload Reports were used as the source of data for the analysis. A summary of this data appears in Table 4. The trend of OB-GYN Clinic visits per month for FY90 to FY92 (through February 1992) is graphically depicted in Figure 2.

Insert Table 4 here

Insert Figure 2 here.

Overall, the total number of OB-GYN Clinic visits decreased from 35,031 in FY 90 to 31,341 in FY 91. Midway through FY 92, the number of visits continues to show a declining trend. A comparison of the period October through February between FY 90, FY 91, and FY 92 shows that the total number of clinic visits for this period was 14,035, 12,565, and 12,131 respectively. The trend of decreasing visits has equated to a decreasing number of Ambulatory Workload Units (AWUs) credited to the clinic. With the exception of the months of July 1991 and January 1992, workload and subsequently AWUs has decreased every month from October 1990 to February 1992.

During FY 1990, the clinic recorded a total of 35,051 visits equating to 870.5381 ambulatory work units. The average number of visits per month was 2,921 with a standard deviation of 284.388. The number of OB-GYN clinic visits as a percentage of all WRAMC clinic visits was 3.58%. Of the total OB-GYN Clinic visits, Family Planning accounted for 24% (8413),

Gynecology for 37.49% (13,139), and Obstetrics for 38.51% (13,499) of the visits. The AWUs for Family Planning, Gynecology, and Obstetrics were 209.48, 310.08, and 350.97 respectively.

During FY 1991, the clinic recorded a total of 31,341 visits equating to 771.8416 AWUs. The average number of visits per month was 2,740 with a standard deviation of 244.01. The number of OB-GYN clinic visits as a percentage of all WRAMC clinic visits was 3.37%. Of the total OB-GYN Clinic visits, Family Planning accounted for 8.74%, Gynecology for 53.19%, and Obstetrics for 38.07% of the visits. The AWUs for Family Planning, Gynecology, and Obstetrics were 68.22, 393.44, and 310.18 respectively.

For the period October to February 1992, the OB-GYN Clinic recorded 12,131 visits equating to 295.3245 AWUs. The average number of visits per month was 2,426 with a standard deviation of 188.72. Of the total OB-GYN Clinic visits, Family Planning accounted for only .24% (29 visits all in October), Gynecology for 68.86%, and Obstetrics for 30.9% of the visits.

In addition to revealing that overall workload has been declining, the data reveals that the percentage of gynecological visits has been increasing while that of

obstetrics has been declining.

Workload Reporting

Clinic workload is recorded and reported using the Composite Health Care System (CHCS). Both the front desk receptionists and the SAC perform functions integral to the process. The process of recording workload begins at the reception desk where patients inprocess. When a patient with an appointment is inprocessed at the front desk, the receptionist queries CHCS for the patient's name and appointment time and enters that the appointment was "kept". For walk-in patients, the receptionist must enter the patient data and annotate that the patient was a "walk-in". At the end of each day, the receptionist or the SAC conducts "End of Day Delinquency" processing to ensure that all patients booked for an appointment or seen in the clinic that day are assigned a disposition. This must be done before monthly workload reports can be processed at the end of the month. The possible dispositions include "kept" (kept appointment), "walk-in", "no-show", "cancellation", "telephone consult", or "LWOBS" (left without being seen). The End of Day reports also list provider's names so provider workload can be captured. However, only the designation "GYN

Res" or "OB Res" are listed making it difficult to determine individual resident workload.

Until recently, all clinics used CHCS to produce their own monthly workload report. However, this decentralized process was having an adverse impact on the overall response time of CHCS hospital-wide. At the end of each month, 60 clinics were simultaneously using CHCS to compile daily statistics for the month and print five copies of the report.

Under a recently established policy (March 1992), monthly reports for each clinic are centrally produced by the Patient Appointment Systems Office (PAS). Reports are sent to clinics to have deficiencies corrected (i.e. incomplete dispositions) and to be reviewed for accuracy. After this process is completed, the PAS produces a "Command Facility Workload Recap Report" that is used by PAD as the official source of data for reporting workload to PASBA. PAD transmits the information to PASBA and sends a copy to WRAMC's Directorate of Resource Management.

While the current management information system is more convenient for the CHCS system managers, the ability for individual managers to produce their own

workload reports is more restricted. In addition, no system is in place that provides managers with one report that captures both workload (output) and cost (input) data.

Scheduling and Patient Appointment Systems Review

Clinic Scheduling

The Clinic Chief prepares the clinic schedule each month. Depending upon physician availability, the number of appointments for each type of subclinic may vary from month to month. Once the Clinic Chief determines the clinic capacity for the following month, she prepares a list of changes to be made for appointment availability. These changes indicate, by day, the amount that each type of appointment needs to be increased or decreased in terms of available appointments. For example, the Clinic Chief may request that GYN Type II appointments for April 7 be decreased by one-third. The clinic chief gives this list of changes to the SAC who coordinates these changes with the Central Appointment Service (CAS). The Central Appointment Service (CAS) then books appointments based on this revised clinic schedule template. The Clinic Chief also distributes the list

of clinic schedule changes to other clinic staff who have responsibility for booking appointments.

Physician Scheduling

In general, the physicians' schedules revolve around the graduate medical education program. In accordance with the residency program requirements, faculty and students divide their time between inpatient care, outpatient care, lectures, and research activities. The clinic schedule for Academic Year 1991-1992 is organized so that most of the residents and staff are involved in activities outside the clinic on Monday, Wednesday, and Friday. These activities include performing surgery in the Operating Room, providing coverage in labor and delivery, and providing ward coverage. In addition, Thursday mornings are reserved for weekly meetings, lectures, and other activities. Hence, Tuesdays and Thursdays (afternoon) are usually peak workload days when most of the subclinics are held and the greatest number of physicians are working in the clinic.

The three civilian physicians, including the CHAMPUS partnership provider, follow a fixed schedule during the week. One of the physicians works 9 hours per day on Tuesday, Wednesday, and Thursday seeing GYN

Type I and II patients. Another works 9 hours per day, Monday through Friday, seeing GYN Type I and II patients. The CHAMPUS partnership provider works 9 hours per day Monday through Thursday and 4.5 hours on Friday seeing GYN Types I and II patients, OB Follow-ups, and colposcopy patients.

The clinic chief is in the clinic seeing patients and supervising residents 9 hours per day, Tuesday through Friday. Other staff physicians and clinical fellows work in the clinic at various times depending on when their specialty clinic is held and in accordance with their personal schedules.

Patient Appointment System

Patients are scheduled for appointments in the OB-GYN Clinic in a variety of different ways depending upon the type of appointment they need. The system is a hybrid of centralized and decentralized appointment making procedures. Appointments can be obtained through the Central Appointment System (CAS), the clinic's front desk clerks, nurses, physicians, or secretaries. A matrix showing the different routes for obtaining appointments in the various subclinics is contained in Table 5.

Insert Table 5 here

The CAS schedules outpatient appointments for 18 different types of clinics, seven of which are OB-GYN clinics. These seven clinics are GYN (Type I), GYN (Type II), OB (New), Norplant, Sterilization, and Post-Partum Followup. As previously mentioned, the Clinic Chief determines the number of appointment slots per subclinic for each month. The SAC coordinates any changes in appointment availability for the following month with CAS. In addition, the SAC reserves a number of appointment slots that can be booked by the clinic. These slots are usually reserved for follow-up of GYN Type II emergency patients.

The times allotted for patient appointments vary depending on the type of appointment. For OB appointments, OB physicals are allotted 30 minutes, complicated OB appointments are allotted 20 minutes, and OB follow-up appointments are allotted 30 minutes. For GYN appointments, GYN Type I appointments are 20 minutes, GYN Type II appointments are 30 minutes (the CHAMPUS physician usually allots 40 minutes, but times

vary from 20 to 40 minutes for GYN Type II appointments), Infertility appointments are 30 minutes, Colposcopy appointments are 30 minutes, and Oncology appointments are 30 minutes. The Norplant, Sterilization, and OB classes are each given to a group of 20 and are scheduled for a four hour block.

The waiting times for getting an appointment in the OB-GYN clinic vary with the type of appointment. An analysis of the waiting list for the various subclinics for the period March 1991 to April 1992 was conducted using data available in the clinic.

On average, the three subclinics with the longest wait list were the GYN Type I Clinic, the GYN Type II Clinic, and the Infertility (New) Clinic. The GYN Type I Clinic, which primarily consists of women seeking PAP smears, had an average waiting list of 1331 patients equating to an average wait time of 7.23 months for an appointment. The GYN Type II Clinic had an average waiting list of 131 patients with an average wait time of 2.29 months. From March 1991 through November 1991, the Infertility (New) Clinic had an average waiting list of 114 patients with an average wait time of 4.5 months (See Table 6). However, this Infertility Clinic has not had anyone on the waiting list since December

1991.

Insert Table 6 here

Interviews with clinic physicians and other staff members revealed a concern about the patient no-show rate. Hence, daily appointment statistics for period of 30 March through 30 April 1992 were examined. Specifically, the researcher examined the total number of patients seen, the number of walk-in patients, the number of cancellations, and the number of patient no-shows. The source of this data was the "End of the Day Processing Reports" available through CHCS and generated by the clinic on a daily basis. A summary of descriptive statistics for the 24 day period is contained in Table 7.

Insert Table 7 here

During this period, 2,245 patients were seen in the clinic. The average number of visits per day was

93.54 with a standard deviation of 31.05. By far, Tuesday was consistently the busiest day of the week with no one particular day consistently appearing as a low workload day.

The total number of no-shows for the period was 191 equating to an average of 7.59 no-shows per day with a standard deviation of 6.17. In general, Tuesdays and Thursdays had the highest number of cancellations and no-shows during the period. This was not surprising since the greatest number of appointments are booked for these days.

The total number of walk-in patients for the period was 878. As a percentage of total patients seen, the percentage of walk-in patients ranged from a low of 23% on April 7 to a high of 60 % on April 29. The average number of walk-in patients per day was 36.58 with a standard deviation of 7.89. For three of the four weeks examined, Monday was the day of the week with the highest number of walk-in patients.

The total number of cancellations for the period was 236 equating to an average of 9.83 cancellations per day with a standard deviation of 5.63.

Facility Review

The OB-GYN Clinic is located on the first floor, northeast corner of Building 2, WRAMC. Patients have easy access to the clinic from the patient parking lot which is located just outside the hospital across from the clinic. The Clinic is located adjacent to the Outpatient Pharmacy and on the same floor as the Emergency Room and the Radiology Clinic. The laboratory services are located on the second floor of the hospital.

The clinic is laid out in a somewhat linear fashion with the waiting room/reception area in the front of the clinic and the exam rooms and physician offices located on both sides of two hallways in the main area of the clinic.

While the clinic design does not facilitate an ideal patient flow, the staff has made efforts to direct patients in a logical sequence through the clinic. Patients are accompanied by a member of the nursing staff when moving from the waiting area to the weight room, a doctor's office, or an exam room. After their encounter, patients are directed to stop back at the front of the clinic to see the exit clerk. To help ensure that patients flow back to the exit clerk, a

sign is posted on the door separating the treatment area from the main waiting area. This sign tells the patient that the door is not an exit and that patients must exit through the other corridor to see the exit clerk. The exit clerk's office is located adjacent to the reception at the front of the clinic.

In total, there are 21 exam rooms and 14 physician offices. The ratio of exam rooms to providers varies from day to day with the number of physicians seeing patients in the clinic. In a peak workload scenario with all seven staff physicians, seven residents, and three civilian physicians working in the clinic during the same period, the ratio would be 1.23:1. However, usually between six and eight physicians are in the clinic providing a ratio of between 3.5:1 and 2.63:1 exam rooms to provider.

The current method of assigning rooms to physicians appears to work well. However, office space is limited on peak workload days such as Thursday afternoon. While the civilian physicians do have their own offices with adjoining exam rooms, residents and staff physicians share offices and exam rooms.

The reception area is a small area consisting of a semi-circular countertop and limited

space for accommodating two receptionists. Currently, there are two CHCS terminals, a printer, two telephones, a two-drawer desktop file drawer, a stamping machine, and a telelift (mail distribution) system occupying the reception area space. The desk space for the receptionists often seems cluttered with reports, medical charts, and various other documents that accumulate during the day. A large metal cart holding patient charts also occupies hallway space outside the reception area space.

The main waiting area across from the reception desk has seating for 40 patients. In general, the waiting area is not aesthetically pleasing. The decor consists of unattractive row seating, tile floors, and windows covered with venetian blinds. Other furniture includes two televisions at one end of the clinic (one is a patient education system that is rarely used), two large white trashcans, and a magazine rack. Another waiting area with 8 chairs exists at the back of the clinic for OB patients who have been inprocessed and are waiting to be seen.

CHAPTER IV - DISCUSSION AND ANALYSIS

Organizational Analysis

The operational review of the organization consisted of an examination of mission and function, goals, and organizational structure of the clinic. Through interviews with clinic staff, a review of clinic policy and procedures, and personal observation, the researcher found that several organizational factors impacting clinic productivity deserve discussion.

One of the most fundamental organizational issues involves the organization's statement of mission, goals, objectives, and values. Currently, the OB-GYN Department has a Strategic Plan (undergoing revision) and a "Mission/Goals Template" that incorporates the missions, goals, and objectives for all OB-GYN Services into one document. While this may be the standard format at WRAMC, the Outpatient Clinic should have its own organizational statement communicating the Clinic's mission, goals, objectives, and values to clinic staff and patients. This statement should be congruent with the overall statement of the OB-GYN Department, but be clinic-specific and outpatient care oriented. Ideally, representatives from the clinic physicians, nursing

staff, and administrative support staff should participate in developing and approving the statement. Such a statement would serve as a base point for getting employee commitment to organizational goals. A statement of values informs the staff and patients that management cares about their opinions and well-being.

As WRAMC begins implementing Total Quality Management (TQM), work centers at all levels of the organizational hierarchy must become more customer-oriented. These customers include both internal customers (staff) and external customers (patients). By developing its own organizational statement, the Clinic will be acknowledging the special nature and challenges involved with outpatient OB-GYN care.

The management structure of the OB-GYN Clinic resembles that of other outpatient clinics at WRAMC and other academic medical centers in the Army Medical Department. A triadic structure consisting of the Clinic Chief, the Head Nurse, and the SAC functionally manages the clinical, nursing, and administrative systems respectively. The efficiency and effectiveness of the clinic relies upon the degree to which these systems integrate.

Through interviews and personal observation, the

researcher found that the clinic was struggling to fully integrate these systems. The Clinic seems to have an informal management process that integrates administrative, nursing, and medical perspectives, but does not have a formal management team that oversees service delivery. This finding is not unusual in the field of health care delivery. According to Taft and Pelikan (1990), members of different health care disciplines (physicians, nurses, and administrators) possess their own professional myopia or ethnocentrism.

In the OB-GYN Clinic, physicians, nurses, and administrative support staff all view quality patient care as a primary goal. However, each discipline views patient care from their own perspective. Since WRAMC is a teaching hospital, medical education and research is an important component of patient care for physicians. In accordance with the demanding parameters set by a graduate medical education program, physicians must allocate their time and attention to functions outside the clinic such as inpatient care and lectures. The nursing staff devote most of their attention to patient care, education, and organizational support of the physicians working in the clinic. The administrative staff ensures that the

administrative and logistical systems support the context within which care takes place.

Clearly, the Chief of the OB-GYN Department wishes to improve the integration of the different disciplines within the clinic. One his top three "Command Impact" objectives is to "improve teamwork in the Clinic". In his view, the barriers to achieving this objective include the following: (1) personalities; (2) physician turnover; (3) "stovepiping"; and (4) leadership and organization. Since personalities and physician turnover (in the military) are difficult to control, the issues of stovepiping, leadership, and organization deserve further discussion.

The issue of "stovepiping" refers to the functional reporting relationships among the different disciplinary groups of clinic staff members. The Chief of the OB-GYN Clinic and the Chief, OB-GYN Department do not have total command and control of clinic staff. This is one of the issues that most concerns the Chief of the OB-GYN Department. He would prefer to eliminate the traditional "stovepiping" of personnel that exists.

A review of the clinic's reporting relationships and performance evaluation scheme (see Figure 1) revealed that nursing staff and administrative support

staff are evaluated along functional lines.

For example, the performance of the Head Nurse, NCOIC, and nursing staff is evaluated by members of the Department of Nursing. Another example involves the part-time logistic specialist assigned to the clinic. This specialist is assigned to and evaluated by the Hospital Logistics Division, not the clinic. The underlying assumption is that with the elimination of the vertical reporting relationships and subsequently greater control of clinic personnel that the goals of the clinic and OB-GYN department could better be achieved.

The issue of organizational control is certainly a valid management concern. With a dual reporting relationship, the Head Nurse provides regular management reports to and receives guidance from the Nursing Department while being responsible to OB-GYN physicians for nursing staff support in the Clinic. While this structure is not a true matrix structure, the Head Nurse must still possess the behavioral skills necessary to function in a matrix-type organization. Allcorn (1990) states that these skills include tolerance of ambiguity, communication skills, conflict resolution skills, and group dynamics skills.

Obviously, there will be times when the goals and opinions of the Nursing Department will clash with those of the OB-GYN Clinic. The Head Nurse must be able to manage this conflict with support from both hierarchical channels.

The Chief of the OB-GYN Department and some of the clinic staff would also like to have a logistics specialist dedicated full-time to the OB-GYN Clinic. Under the current arrangement, a logistics specialist (E4) assigned to the recently created Hospital Logistics Division supports the clinic on a part-time basis. The staff seems primarily concerned about the specialist's substandard performance and the lack of accountability for her duty location during the day. Although the NCOIC of the Clinic informally supervises the specialist's performance as it applies to the clinic, either the NCOIC himself or the SAC often end up personally filling out supply requests and tracking down supplies ordered.

While a more effective system may need to be implemented in getting daily logistics support, the solution of gaining single line authority over the logistics specialist, the Head Nurse, or other clinic staff may not be the best solution for improving clinic

productivity. Werft and Files (1983) state that the nature of ambulatory care, particularly within an academic health center, is such that matrix organization is a "sine qua non." Their point is that a single line of authority is impossible when clinical outcome is dependent upon multiple inputs. In the OB-GYN Clinic, these inputs include medical and nursing input, as well as logistics input, medical record input, and an array of administrative input provided by staff and supported by the medical center's administrative structure and management information systems.

However, the Clinic Chief could exercise more control over the Head Nurse, SAC, and NCOIC by being included somewhere in their performance rating scheme. This seems appropriate given that these people work under the direct supervision of the Clinic Chief on a daily basis. This arrangement assumes that the Clinic Chief is empowered with the overall management responsibility for clinic operations at the service level. The Department of Nursing may resist this arrangement because of the fear that physicians don't truly understand the functions and responsibilities of nursing. However, this can be overcome by keeping a

member of the Department of Nursing in the rating chain and through dialogue between raters.

The NCOIC, in particular, should have the Clinic Chief in his rating chain. Currently, the NCOIC is performing his duties according to the priorities of the Head Nurse who is his rater. The title of NCOIC implies that the individual performing that role has significant responsibility for managing overall operations. Hence, the Clinic Chief could be using this person to perform a broader level of duties as she sees fit.

The issue of clinic leadership is a factor that probably impacts efficiency and effectiveness more than any other one factor. While changes to organizational structure and performance evaluation schemes may facilitate teamwork, only good leadership will foster an environment that encourages frequent communication among disciplines.

As in many health care organizations, the Clinic Chief is a physician-manager with limited management experience. According to Fogel (1989), a common set of criteria for good managers includes experience in managing multiple relationships, knowledge of all parts of the organization, good interpersonal skills, and

ability to do both management and technical work. Since most physicians don't receive formal management training early in their career, if at all, the organization must develop their physicians as managers. Hence, one of the advantages of installing inexperienced OB-GYN physicians as the Clinic Chief may be that they are allowed to develop their managerial skills early in their career. Inexperienced managers and the reality of short-term assignments, however, are detrimental to the efficiency and effectiveness of the clinic over time. Nonetheless, given these realities, WRAMC should consider establishing a program designed to provide short management courses to clinic managers. In addition, a structure could be established that allows physician-managers of outpatient clinics to meet regularly and discuss common issues. A similar structure, hospital-wide, should be established for outpatient clinic nursing staff and SACs. At some level, these issues could be integrated in a multi-disciplinary committee.

Taft and Pelikan (1990) describe the use of "clinic management teams" (CMTs) , comprised of a physician manager, a head nurse, and an administrator, as interdisciplinary management units in an ambulatory

care setting of a large teaching hospital. These CMTs were key decision making bodies whose functions included planning for delivery of clinic services, ensuring quality, managing operations, maintaining system efficiencies, and directing the business and fiscal functions of the ambulatory care. Some of the issues that CMTs addressed included space utilization, supply utilization, personnel scheduling, and patient flow through the clinic.

Several coordinating structures were central to the functioning of the CMTs. These structures were the Ambulatory Medical Management Committee, the Clinic Business Office, and the Ambulatory Management Group. The Ambulatory Medical Management Group brought physician managers together to discuss areas of common concern. Head nurses and administrators also met to discuss discipline-specific issues. The Clinic Business Office supported the needs of the CMTs by changing systems (registration, billing, etc.) to meet their needs. The Ambulatory Management Group provided overall direction for ambulatory care in the hospital. This interdisciplinary team consisted of the administrative vice-president for ambulatory care, two physicians, the director of ambulatory nursing, the

director of the CBO, and one administrative director.

The Head Nurse of WRAMC's OB-GYN Clinic perceives that she is not being utilized to her fullest potential. Her perception of her role is that of a "glorified secretary" with limited opportunities for utilizing her skills and experience as a Registered Nurse. She would like to have more responsibility as a clinical resource for patients and as an educator of the clinical staff. In addition, she would like to have more input into upper management issues such as strategic planning and general management of the clinic. The issue remains whether or not she took the initiative to empower herself to do some of these things.

In a recent article about creating productive work environments, Esty (1992) states that research has shown that 60 percent of employees believe that they are significantly underutilized. According to Esty, motivation among health care workers is frequently diminished because staff do not feel "valued, respected, or supported." While the concerns expressed by the Head Nurse may or may not be valid, the important issue for management is that such a perception exists. Since, as Drucker (1991) stated,

the knowledge and service workers are the best source for understanding the nature of work, so too are they the most valuable source for getting ideas on how to improve productivity.

Staffing Analysis

The current clinic strength exceeds that recommended by the last Schedule X by a total of three personnel. This difference includes a net gain of five personnel and a net loss of two personnel. The net gain includes one Clinic NCOIC, one SAC, one patient administration specialist, and two medical clerk typists. The net loss includes one medical specialist and one nursing assistant. The addition of administrative support personnel has occurred as the administrative structure of WRAMC has changed over time to provide better direct support to the clinic.

A comparison of the average monthly workload used in the 1982 Schedule X (2784.2 visits) with the average monthly workload in FY 1991 (2740 visits) would suggest that the clinic's overall staffing level is currently sufficient to support the workload. However, such a comparison must be used cautiously since factors such as changes in practice patterns, technology, patient

acuity, number of physicians practicing in the clinic are not considered.

To determine a recommended staffing level for the Clinic, the researcher applied the new Joint Healthcare Manpower Standard ("OB-GYN Clinic Standard, DOD 6102-STD") using workload data and information from the clinic staff (see Appendix B). This calculation yielded a figure of 39 manpower requirements. This figure seemed very high compared to the staffing recommended by the 1982 Schedule X and that currently authorized by TDA for the Clinic.

Initially, the researcher thought that perhaps this staffing level was supposed to apply to the whole Department of Obstetrics and Gynecology. However, personnel from the United States Army Health Care Management Engineering Activity have confirmed that the standard applies to the OB-GYN Clinic only. An apparent weakness of the standard is that the work center description does not include some of the highly specialized services delivered by the WRAMC OB-GYN Clinic. In addition, it does not consider the regional oversight function of WRAMC.

During interviews with clinic staff, the issue of chaperone coverage surfaced as a significant staffing

issue. Some of the physicians and nursing staff feel that more chaperones are needed especially during peak workload periods. The number of chaperones needed during any given period is a function of the number of physicians seeing patients in the clinic. Since the clinic schedule varies on a daily basis, the number of physicians in the clinic also varies. This number can range from six during one block of time (morning/afternoon) to as many as fifteen during another. A factor that impacts the availability of chaperones is the fluctuation in workload that occurs throughout the week. This fluctuation in workload is a function of the clinic schedule and unexpected demand (i.e. walk-ins). On Mondays and Wednesdays, most of the OB-GYN physicians are scheduled to spend time in the Operating Room. Hence, there are fewer physicians working in the clinic on these days and a greater number scheduled to work in the clinic on Tuesdays and Thursdays. Subsequently, a greater number of patients are scheduled for the various clinics on Tuesday and Thursday (afternoon). With a greater number of physicians requiring a chaperone and a greater volume of patients to see, the demand for chaperones is greater. Assuming that all eight nursing assistants

are present for duty, the nursing assistant to physician ratio may range from a high of 1.33 to a low of .53.

With a fixed number of nurse assistants available to chaperone, the loss of one or more nurse assistants on any given day (e.g. sickness, leave, etc.) compounds the problem of chaperone coverage, especially on peak workload days. Hence, the Head Nurse and LPNs often assist in providing chaperone coverage. While chaperones normally provide coverage for one or two physicians, I did observe days when (due to a staffing shortage) chaperones provided coverage for three physicians at the same time. In most cases, this situation inevitably caused lost time for a physician who had to wait for a chaperone in order to begin an examination or procedure. This lost time impacts upon the physician's productivity.

The data in Table 3 shows that the other Medical Centers are, on average, seeing more patients with less nursing staff and fewer chaperones. WRAMC has the lowest ratio of average patients per month to chaperones (208.33) while Tripler Army Medical Center has the highest (661.54). Using average patients per month as an output and number of available chaperones

as input, a rough measure of productivity could be calculated. In this case, WRAMC would appear to be the least productive of the above medical centers. However, such a comparison does not account for available manhours and the differences in mission and function between facilities.

Several actions have been taken to help the chaperone situation. One action is to limit chaperone coverage to the confines of the clinic. In the past, chaperones had to be provided twice weekly to a physician in the departmental office on the second floor and on Thursday afternoons in radiology to assist an infertility specialist who conducted hysterosalpingrams. Another action taken was to spread out GYN Type II appointments over the course of the day instead of grouping them all in one block of time.

The strategy of using Red Cross personnel or other types of volunteers as chaperones has not been successful. According to one of the practical nurses, volunteers usually don't last long in the clinic because of the nature of the chaperone function.

Workload Analysis

The trend analysis of the OB-GYN Clinic's workload revealed an 11.7% reduction in clinic visits from FY 90 to FY 91 with a continuing trend of decline midway through FY 92. Figure 2 shows that workload generally declines from October through December, peaking in January and steadily increasing to peak levels in July and August.

The obvious concern about a trend of declining workload involves budgeting implications. Currently a work center's supply budget is determined by that center's workload. Under the recently established workload system, the cost-based statistic which represents outpatient workload is the Ambulatory Workload Unit (AWU).

The AWU is calculated by multiplying the service-specific weighting factor by the total number of clinic visits. The utilization of service-specific weighting factors represents a major departure from the previous workload reporting system where all clinic visits were weighted equally. These weighting factors apply to all military hospitals within DOD and are intended to better relate clinic visit workload credit to resource consumption. Currently, these factors only account for

supply costs, but in the future will be based on supply and personnel costs.

The OB-GYN Clinic's trend of declining workload may be indicative of a trend experienced throughout the military health care system. In a General Accounting Office (GAO) Report to the Senate Appropriations Committee (July 1989), the GAO reported that beneficiary outpatient visits decreased at all three services' facilities for fiscal years 1985-1987. The greatest reductions in number of outpatient visits were in the obstetrics/gynecology specialty which decreased 11%, a decline roughly equivalent to the 11.7% decrease experience by WRAMC's OB-GYN Clinic from FY 90 to FY 91.

The Clinic's method of measuring and monitoring productivity is typical of most Army outpatient clinics. Goals are not set for outpatient encounters and little incentive exists for the individual provider to be more productive. In an article titled "Outpatient Productivity: Improvement by Application of Quality Management", Jacobson and Watters recommend a leadership strategy for improving productivity. The components of this strategy include involving the practitioner in goal setting, setting goals for

outpatient encounters (provider specific goals and clinical unit goals), instituting meaningful measures of productivity, ensuring that actual work is reported, providing feedback, and providing tangible rewards.

Scheduling and Patient Appointment Systems Analysis

One of the concerns that surfaced through interviews with the clinic staff was the fluctuation in demand that occurred throughout the week. One of the obvious explanations for the occurrence of these "peaks and valleys" is the Clinic's scheduling of subclinics and physicians to staff these clinics. Under the current Clinic Schedule, the high demand gynecological clinics are held on Tuesday and Thursday. Hence, the greatest number of physicians are scheduled to work in the Clinic on these days. Subsequently, more patients are appointed to receive care on these days. In essence, the current scheduling of subclinics and physicians is contributing to the varied service demand pattern in the Clinic. A redistribution of physician time within the Clinic would probably result in a more even workload for nursing and administrative support staff and a reduction in patient waiting time. However, the academic schedule for graduate medical

education may complicate the rescheduling of residents and staff.

A review of the Clinic's patient appointment system revealed that the system is a combination of a centralized and decentralized system. While there are advantages and disadvantages to each type of system, Ross et. al. (1991) state that it is not necessary to choose just one or the other. In many instances, modifications of one of the types of systems or a combination of both may be appropriate. Given the highly specialized nature of some of the Clinic's services and the current number of administrative support personnel, the hybrid system in place seems appropriate.

Nonetheless, the Clinic's system is a complex one that involves several ways of getting an appointment. The rules for scheduling appointments vary with the reason for the visit. However, the appointment scheduling matrix (see Table 5) shows that several people may schedule an appointment for the same subclinic. In addition to the subclinics shown in Table 5, "private patients" may be scheduled by a physician and walk-in patients are essentially self-scheduled.

The present system impacts the clinic's ability to accurately predict workload on a daily basis. Subsequently, the nursing staff has a greater problem in properly assigning chaperones. While the automated system (CHCS) helps track patient appointments, the possibility of patients not properly entered on CHCS is greater with a greater number of ways to get appointments and several different people making appointments.

An analysis of patient appointment statistics for the period March 30 to April 30 1992 revealed that the Clinic sees a significant amount of walk-in patients. During this period, the average percentage of walk-in patients per day was 36.58%. The Clinic does manage the supply of resources dedicated to these patients by scheduling walk-in clinics twice daily (morning and afternoon). Nonetheless, these patients represent an unexpected workload that makes resource planning more difficult. Fortunately, the number of walk-in patients appears stable from day to day with a standard deviation of only 7.89. In addition, the greatest number of walk-ins occurred on Mondays for three of the five weeks studied. Hence, with some further analysis using a larger sample size, the clinic should be able

to identify daily and seasonal patterns.

An interesting phenomenon appears to be happening in regards to the walk-in patients. According to the clinic staff, many patients use the walk-in clinics because the waiting time to get an appointment is so long in other clinics such as GYN Type I.

The number of cancellations and no-shows was also analyzed for the period March 30 to April 30 1992. For the period, the Clinic experienced a daily average of 9.83 cancellations and 7.59 no-shows. Given the average daily load of 93.54 patients for the period, the cancellation and no-show rates were 10.5% and 8.11% respectively.

Facility Analysis

In general, space is an extremely limited and valuable commodity at WRAMC. Technological advances in medicine, new equipment, growth in types of services offered, and changes in the delivery of health care have are causing WRAMC to outgrow the space available in its current structure. In fact, plans are underway to expand a number of patient care services into the old hospital building. This building is currently being assessed to determine what structural changes

need to occur to ensure the delivery of safe patient care. Given the changes that have occurred over the past twenty years since the current hospital was built, all departments need to reassess their space requirements. The researcher did not attempt to conduct an in-depth analysis of the functional changes that have occurred in the OB-GYN Clinic, but understands that such a task needs to occur to properly assess space requirements.

Overall, the functional design of the OB-GYN Clinic does not appear to impede productivity. An analysis of space utilization revealed that the average exam room to provider ratio may range from as high as 3.5:1 to a low of 1.23:1, depending on the number of physicians present in the clinic. While the clinic's number of exam rooms per provider may be lower than that present in some civilian practices, the number appears adequate given the average daily workload. However, physician productivity would be enhanced, especially during high workload days, if each physician consistently had two exam rooms with which to see patients. Ideally, the physician could see one patient while another is being prepared to be seen by the nursing staff. However, the OB-GYN Clinic, like most

DOD outpatient clinics, is not designed for maximum productivity.

The reception area could also be enhanced for greater productivity and customer satisfaction. The reception area consistently appears cluttered with medical charts, computer printouts, and miscellaneous documents. The reception area is small and does not appear to be a comfortable working environment for two people. One of the problems is that it appears that the receptionist area was not designed for the amount of automation equipment currently occupying space. Currently, the printer, which is heavily used, is in a location that is not easily accessible by both receptionists. To get a printout, one of the receptionists must reach over another receptionist to get access to the printer. Another item occupying space is the Mosler Telelift system (automated internal distribution system). During my observations, this system was never used. Because of a lack of space, patient's medical records are placed on top of one the distribution boxes. Space is also lacking for storing blank forms, reports, and other paper items. One of the desk drawers from the reception desk has been removed to make space for a portable storage cart

holding blank forms.

The reception area is the patient's first point of contact in the OB-GYN Clinic. The patient's first impressions are formed by the appearance of the area as well as by the efficiency and demeanor of the receptionist. If this first point of contact does not appear professional and well organized, the patient may form a negative first impression that could influence her opinion about the overall quality of care. From a managerial viewpoint, the workplace should be designed to facilitate maximum productivity. Employees generally want to work in a neat and professional work environment. The functional design of the work environment can be a large factor influencing the employee's level of productivity. According to Joyce (1988), "a good working environment enhances employee performance, motivation, and well being; a poor work environment can hinder these aspects to the point where the employee decides to leave."

The functional design and decor of the waiting area (and clinic overall) may also detract from customer satisfaction and employee performance. Since patients usually spend much of their clinic visit in this area, their attitudes and impressions about the

clinic are influenced by the environment of the waiting area. In terms of employee performance, Joyce (1988) states that an "aesthetically pleasing environment can help reduce the physical and psychological stress in offices and contribute to job performance."

Fortunately, there are plans to redesign and redecorate the waiting area. Recently, the entire clinic was repainted. The plan for the waiting area is to divide it into three sections to offer a cozier and more inviting appearance. New modular seating will be installed in such a manner as to create this sense of three separate areas. Each area will have a circular coffee table as a centerpiece of the section. Carpeting, curtains, colorful wall prints, and plants will also be added. The color patterns of the furniture, carpet, and curtains have also been coordinated for an aesthetically pleasing look.

CHAPTER V - CONCLUSIONS AND RECOMMENDATIONS

This research was conducted to gain an understanding of the operations in the Obstetrics and Gynecology Outpatient Clinic at Walter Reed Army Medical Center and to examine systemic factors influencing productivity. The research methodology consisted of an operational review and analysis of the clinic's organizational structure, staffing, workload, patient appointment system, and physical layout. This operational review and analysis served as a first step in identifying aspects on which to focus productivity efforts.

The OB-GYN Clinic is faced with multiple barriers to productivity inherent in the military health care system. One of the most significant of these barriers is that true incentives for high productivity do not exist. Although some providers and staff understand that the clinic's budget is loosely tied to workload, the fact is that individual performance evaluations and compensation are not contingent upon productivity measures. As part of the military's largest teaching hospital, the clinic must also function in a dynamic environment heavily oriented to the priorities of graduate medical education.

Nonetheless, the challenge to improve productivity exits and will increase with the downsizing of the military. While resources become less available for military health care, the beneficiary population will remain relatively stable. A great deal of uncertainty exists about the future of military health care. For example, the civilian and military leaders have yet to reach consensus about such things as Coordinated Care, CHCS, and the future of graduate medical education in the military.

In this environment of uncertainty, the leaders and staff of the OB-GYN Clinic must work together to create an environment that fosters maximum productivity. The Chief of the OB-GYN Department and other key leaders have already taken many steps to improve the clinic's efficiency and effectiveness. In addition, many of the OB-GYN Department's goals and objectives are directed at improving the image and operations of the clinic. However, the success of future productivity improvement efforts will be determined largely by a leadership strategy that encourages productivity.

Hence, while several of the author's recommendations propose changes to the operational

aspects of the clinic, the author's primary recommendations focus on implementing a leadership strategy that involves setting goals and improving the integration and communication between the different professional disciplines within the clinic.

Recommendations

Recommendation 1

The leaders of the OB-GYN Department and OB-GYN Clinic should adopt a leadership strategy to improve clinic productivity. This strategy should consist of sound management principles such as goal setting, incentives, and shared communication that will allow management to take control of its productivity improvement efforts. Using a model suggested by Jacobsen and Watter's, the author recommends that this strategy consist of the following components:

(a) Involve the Practitioner in Goal Setting.

The Chief of the OB-GYN Department and the Chief of the OB-GYN Clinic should involve each practitioner in the definition of expectations for his/her practice. As these key leaders attempt to improve clinic efficiency and effectiveness, physicians must "buy in" to the process. If they are allowed to influence the expectations of their performance, they will be more

likely to accept the goal and attempt to achieve it. This recommendation should also be implemented by the Head Nurse and the SAC for the nursing staff and administrative support staff respectively.

(b) Set Goals for Outpatient Encounters

The Chief of the OB-GYN Department and the Chief of the OB-GYN Clinic should set goals for the individual providers and for the Clinic as a unit. Goals should be set for outpatient visits with full participation of the providers.

Provider specific goals should be individually tailored to each practitioner to consider each individual's capabilities and responsibilities (i.e. teaching duties, residency requirements, readiness training, and other military duties).

Clinical unit goals can be determined by summing the goals of the individual providers within the Clinic. While the Chief of the OB-GYN Clinic should have primary responsibility for setting provider specific goals, the Chief of the OB-GYN Department should have primary responsibility for setting clinical unit goals based upon resource availability.

(c) Institute Meaningful Measures of Productivity.

The OB-GYN Clinic and individual providers should

be evaluated for productivity based upon set goals. It is relatively meaningless to compare just output for one period of time with another without consideration of goals or inputs. One approach suggested by Jacobsen and Watters is to compare the number of outpatient encounters with the number set through the goal setting process.

(d) Assure that Actual Workload is Reported.

While the clinic appears to do a good job of reporting workload, there is always room for improvement especially reporting such things as telephone consults. All members of the OB-GYN Clinic, especially physician trainees, should receive regular training on proper workload reporting procedures.

(e) Provide Feedback.

The Chief of the OB-GYN Clinic should review performance data with each practitioner on a regular basis (perhaps monthly) and provide feedback. This feedback should be informal, largely self-evaluative, and based on comparison to set goals. Similarly, the Chief of the OB-GYN Department should provide feedback to the Chief of the Clinic concerning the clinic's overall performance in relation to goals.

(f) Provide Rewards.

All of the clinic staff should be involved in a reward program that recognizes both quantity and quality of work. These rewards should be based on performance relative to goals. Rewards can be simple, but should be systematic and tangible. Such rewards could include luncheons for the entire clinic staff, additional CME and/or TDY for productive performers, and special letters of recognition from the Chief of the OB-GYN Department or even the WRAMC Commander.

Recommendation 2.

The Clinic Chief should have all of the Clinic staff complete the "Quality and Productivity Self-Assessment Guide for Defense Organizations" distributed at the Strategic Planning Retreat in June 1992. This organizational climate questionnaire will help stimulate thinking about the current climate for quality and productivity within the Clinic.

Recommendation 3.

Implement a "Clinic Management Team" structure similar to the one described in an article by Taft and Pelikan (1990). Such a structure would help to integrate the professional disciplines within the Clinic and help facilitate the flow of ideas for

improving productivity between the medical staff, the nursing staff, and the administrative support staff. To make the clinic management team concept work, however, the OB-GYN Clinic needs the full support of the medical center. WRAMC should consider forming an Ambulatory Management Group that can provide direction for ambulatory care on a hospital-wide basis. This interdisciplinary group of administrators, physicians, and nurses can receive input from all outpatient clinics and provide common guidance on issues that impact productivity. As part of this group, an administrator should be appointed as Director of Ambulatory Care, a position now in place at many civilian hospitals.

Recommendation 4.

The Clinic should develop its own statement of the mission, goals, objectives, and values. This statement should be congruent with the overall statement of the OB-GYN Department, but be clinic-specific and outpatient care oriented. By involving members of the clinic staff from all disciplines in developing the statement, the Clinic leadership can begin creating a positive atmosphere that fosters productivity. Such a statement would serve as a starting point for getting

employees committed to the organizational goals.

Recommendation 5.

The Clinic leadership should consider changing the performance rating scheme so that the Clinic Chief is included in the rating chain of the Clinic NCOIC and the SAC. Currently, both of these people work under the informal supervision of the Clinic Chief and are responsible for accomplishing their duties according to the parameters set by the Clinic Chief. Under this arrangement, the Clinic Chief could exert more formal authority, the NCOIC's duties would be expanded beyond those set by the Head Nurse, and the SAC would be more responsive to the guidance set by the Clinic Chief. This arrangement would allow the Clinic Chief to better achieve future productivity improvement efforts through a more formal reporting relationship.

Recommendation 6.

Physicians appointed to management positions (i.e. Clinic Chief) should receive formal management training. Many times, physicians are thrust into the role of manager without adequate preparation. This is a radical and stressful transition for many physicians. In the current situation of downsizing and resource constraint in the military, the hard fact is that the

clinical and business sides of medicine are being forced into unity as never before. In addition, future DOD policy will require that MTF Commanders have formal administrative training equivalent to that of civilian hospital CEOs.

There are many degree and non-degree management training programs available. However, most physicians do not have the time to invest in long term program. At the very least, WRAMC should develop an orientation program for physician managers. The curriculum for this program should include organization theory and behavior, resource management, interpersonal communication, strategic planning, and productivity. In addition, representatives from the Directorates of Patient Administration, Resource Management, Medical Activities Administration, and Logistics should provide presentations on the administrative systems operating at WRAMC.

Recommendation 7.

Conduct some form of manpower survey analysis to determine staffing needs. The last Schedule X conducted in the Clinic was ten years ago. Although the Joint Healthcare Manpower Standards have been developed for an OB-GYN Clinic, a lot of confusion and

disagreement exists about their appropriateness, especially at a facility like WRAMC. In light of a lack of implementation guidance from Health Services Command, some form of functional and work task analysis should be conducted in the Clinic. In ten years, technology alone has altered the delivery of care.

Recommendation 8.

Establish a formal advice nurse system to perform telephone triage and provide patient education. Currently, the Head Nurse is doing some telephone triage but not as part of an established system. Although resources may be limited for devoting one person full-time to this function, many patients may be prevented from actually visiting the Clinic through such a screening process. According to members of the Clinic staff, much of the patient visit time with the physician involves patient education. By playing a greater role in patient education, the nursing staff can help improve physician productivity. Kaiser-Permanente Health Systems does this with great success.

Recommendation 9.

Establish an evening or weekend clinic to reduce the backlog for routine GYN Type I appointments. The Clinic has contracted with a civilian group to provide

evening clinics beginning in the summer of 1992. By reducing the waiting to get an appointment, the number of patients abusing the walk-in appointment system should decline. The Clinic leadership should conduct a patient survey after the evening clinics are in operation to evaluate patient satisfaction with this new clinic. Some patients may not find weekday evenings to be a convenient time for an appointment.

Recommendation 10.

Redesign the reception desk area to enhance the productivity of the reception clerks. Ideally, the reception area should be expanded to accommodate the amount of automated equipment and array of medical charts and forms that have grown over time. This would involve minor construction (i.e. knocking down a wall) and should be programmed into the budget.

The plan to redecorate the Clinic, especially the patient waiting area, should be implemented as soon as possible. An aesthetically pleasing and comfortable working environment enhances employee performance, motivation, and well being (Joyce 1988).

Recommendation 11.

The medical center must make a concerted effort to provide managers with accurate and timely management

information. Much of the problem is DOD-wide. Military health care managers do not have an accurate, user-friendly information management system that provides meaningful information for costs, productivity, and overall resource consumption. At WRAMC, the MEPRS system needs to be improved to provide managers with such information. The current MEPRS system provides data that is both unreliable and difficult to understand.

Recommendation 12.

As WRAMC begins implementing concepts of Total Quality Management and Continuous Quality Improvement, consideration should be given to forming Process Action Teams that could further study the organizational structure, staffing, scheduling and patient appointment systems, and facility design of outpatient care clinics. The focus should be on enhancing both quality and productivity from the customer's perspective. Many of the ways we do business are structured for the convenience of the providers and staff. The way we view productivity may change with a change to a more customer-focused delivery of care.

CHAPTER VI - REFERENCES

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Table 1Working TDA for OB-GYN Clinic

<u>Position</u>	<u>Grade</u>	<u>Auth.</u>	<u>Auth.</u>	<u>Assigned</u>
Chief, OB-GYN Clinic	O5	1	1	1 (O3)
Medical Officer (OB-GYN)	GS15	1	1	1
Medical Officer (OB-GYN)	GS14	0	2	2
Nurse Practitioner	GS14	1	0	0
Clinic NCO	E6	1	1	1 (E7)
Clinic Nurse	GS11	1	1	1
Practical Nurse	GS5	2	2	2
Nurse Assistant	GS5	6	6	6
Medical Specialist	E4	1	1	1
Medical Specialist	E3	1	1	1 (E4)
Supv. Admin. Coord.	GS7	1	1	1
Med. Clerk (typist)	GS5	2	2	2
Patient Admin. Specialist	E4	1	1	1 (E5)
	<u>Total</u>	<u>18</u>	<u>20</u>	

Table 2

OB-GYN Clinic Staffing Requirements (1981 Schedule X)

<u>Position</u>	<u>#/Type Personnel</u>
Chief, OB-GYN Clinic	1 Officer (MC)
OB-GYN Physician	3 Civilians
OB-GYN Clinical Nurse	1 Civilian
LPN/Nursing Assistant	9 Civilians
Medical Specialist	3 Enlisted
<u>Total</u>	<u>17</u>

Table 3

Workload and Nursing Staff at Six Army Medical Centers

<u>MEDCEN</u>	<u>Avg. Patients/Month</u>	<u>Auth. Nursing Staff</u>
WRAMC	2500	12
Tripler	8600	16*
	* Only 13 available for chaperoning	
Madigan	8600	16*
	* Only 15 available for chaperoning	
WBAMC	4700	9*
	* Volunteers used when available	
Brooke	3300	8
DDEAMC	3000	8*
	* Only 6 available for chaperoning	

Note: Table from COL Carpenter, WRAMC Chief of Maternal and Child Medicine. WBAMC = William Beaumont Army Medical Center; DDEAMC = Dwight David Eisenhower Army Medical Center.

Table 4

OB-GYN Clinic Monthly Visits, FY 90 - FY 92 (through February 1992).

<u>Month</u>	<u>FY 90</u>	<u>FY 91</u>	<u>FY 92</u>
October	3336	2961	2524
November	2906	2470	2263
December	2439	2185	2182
January	2777	2451	2712
February	2577	2498	2450
March	2909	2530	—
April	2806	2579	--
May	2799	2682	—
June	2906	2484	--
July	2873	3104	--
August	3424	2879	--
September	3299	2518	--
<u>Total</u>	35,053	31,341	12,131
<u>Mean</u>	2,921	2,740	2,426
<u>Std. Dev.</u>	284.38	244.01	188.72

Table 5

Appointment Scheduling Matrix for WRAMC OB-GYN Clinic

<u>Clinic</u>	<u>CAS</u>	<u>FD</u>	<u>CS</u>	<u>MD</u>	<u>N</u>	<u>SAC</u>
New OB (Class)	x					
New OB (Physical)		x		x	x	x
Followup/Return OB		x		x	x	x
Postpartum	x					x
GYN Type I	x	x				x
GYN Type II	x	x			x	x
GYN Oncology	x					
New/Return Infertility			x			
Sterilization Class	x	x				x
Norplant Class	x	x				x
Colposcopy		x	x			x
72 Hour Consults					x	
Preop/Postop				x		

Note: CAS = Central Appointment Service; FD = Front Desk; CS = Clinic Secretary; MD = Physician; N = Nurse; SAC = Supervisory Administrative Coordinator.

Table 6

Waiting List for Select OB-GYN Subclinics, March 1991 -
April 1992.

<u>No. Patients on Waiting List/Wait Time(Months)</u>			
	<u>GYN Type I</u>	<u>GYN Type II</u>	<u>Infert.(New)</u>
<u>Month</u>			
MAR 91	174/3	1979/9	279/7
APR	169/3	2179/8	171/6
MAY	129/3	—	—
JUN	236/3	1491/8	217/5
JUL	127/2	1291/7	104/4
AUG	119/2	1048/7	31/4
SEP	113/2	973/6	19/1
OCT	119/2	1108/7	60/2
NOV	93/2	1299/7	35/2
DEC	103/2	1456/8	0/0
JAN 92	136/2	972/6	0/0
FEB	115/2	622/5	0/0
MAR	109/2	1436/8	0/0
APR	86/2	1454/8	0/0

Note: (-) indicates data was not available.

Table 7

Descriptive Statistics of Patient Appointment Data for
the OB-GYN Clinic from March 30 to April 30 1992.

<u>Date</u>	<u>Patients Seen</u>	<u>Walk-Ins</u>	<u>Cancel</u>	<u>No-Shows</u>
MAR 30	90	45	8	8
MAR 31	147	42	16	9
APR 1	64	35	16	9
APR 2	103	43	9	8
APR 3	79	27	6	2
APR 6	97	42	8	4
APR 7	141	33	13	15
APR 8	99	42	5	3
APR 9	90	36	16	8
APR 10	71	26	4	14
APR 13	67	27	5	2
APR 14	157	36	16	15
APR 15	88	41	8	4
APR 16	60	25	9	10
APR 17	89	30	7	7
APR 20	78	51	3	9

(table continues)

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<u>Date</u>	<u>Patients Seen</u>	<u>Walkins</u>	<u>Cancel</u>	<u>No-Shows</u>
APR 21	119	40	12	10
APR 22	64	34	22	3
APR 23	87	27	6	0
APR 24	33	24	5	0
APR 27	105	38	4	11
APR 28	155	49	21	29
APR 29	60	36	2	2
APR 30	102	49	15	9
<u>Total</u>	<u>2245</u>	<u>878</u>	<u>236</u>	<u>191</u>
<u>Mean</u>	<u>93.54</u>	<u>36.58</u>	<u>9.83</u>	<u>7.95</u>
<u>Std. Dev.</u>	<u>31.05</u>	<u>7.89</u>	<u>5.63</u>	<u>6.17</u>

Figure 1.

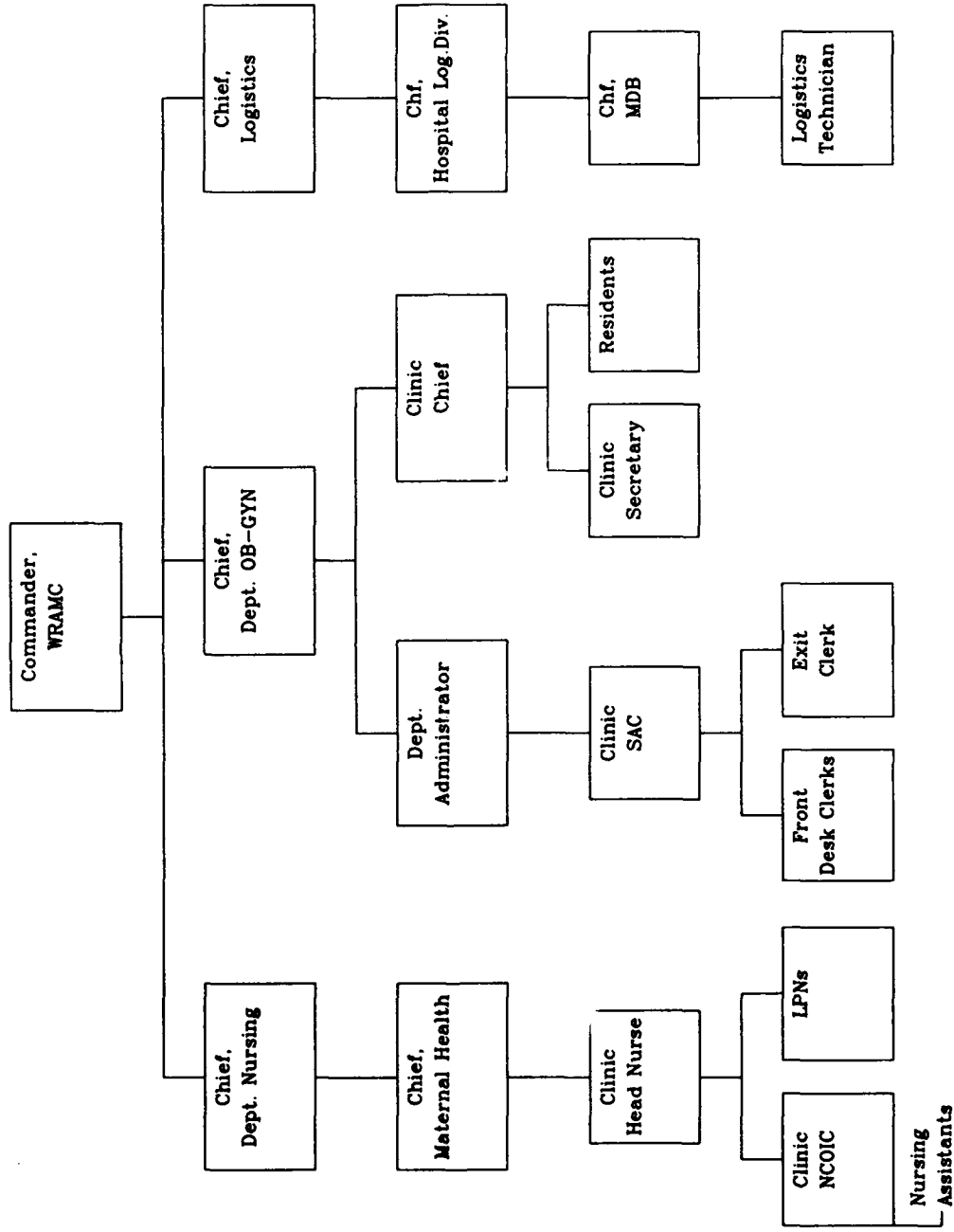
Organizational Chart of OB-GYN Clinic

(arranged according to Performance Rating
Relationships)

(Figure 1 on next page)

Organizational Chart

OB-GYN Clinic



Organized by Performance Rating Scheme

OB-GYN Clinic

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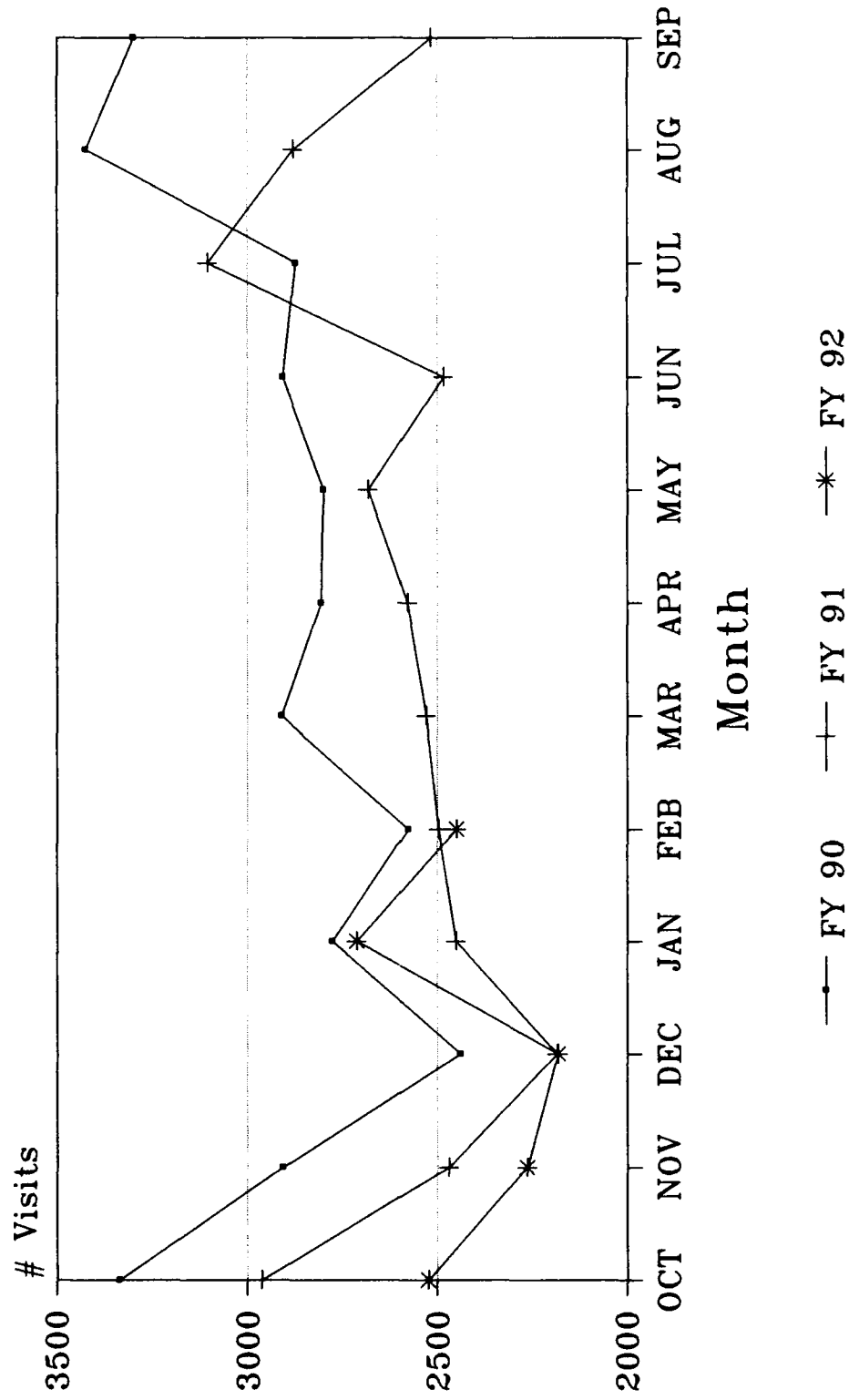
Figure 2

Trend of Monthly Workload for the OB-GYN Clinic
for FY 90 - FY 92.

(Figure 2 on next page)

OB-GYN Clinic Visits

FY 90 - FY 92 (through FEB 92)



Source: DRM Monthly Workload Report

Appendix

Calculation of Manpower Requirements for the OB-GYN Clinic using Joint Healthcare Manpower Standard DOD 6102-STD, Obstetrical-Gynecological Clinic (7 January 1991).

Step 1. Equation.

$Y3 = 508.6 + 1.381(X1) + 19.40(X3)$. Equation for MTFs with an organized 4 year OB-GYN GME training program.

Step 2. Twelve month average for the combined total of OB, Family Planning, and GYN visits (X1).

$X1 = 30,907/12 = 2576$. (Data Source - Monthly Workload Report).

Step 3. Twelve month average for number of OB and GYN inpatient surgical cases (X3).

$X3 = 981/12 = 82$. (Data Source - Surgical Log).

Step 4. Calculation of Manhour Equation using X1 and X3.

$Y3 = 508.61 + 1.381(2576) + 19.40(82) = 5657$

(appendix continues)

Step 5. Calculation of Man-Hour Equation for Research (Y) using twelve month average for number of research projects done by personnel assigned to Clinic (X4).

$X4 = 1$ (Data Source - Chief of OB-GYN Clinic).

$Y = 9.794 + 11.39(X4) = 21.$

Step 6. Add Together Manhours from Steps 4 and 5.

$5657 + 21 = 5678$ Manhours.

Step 7. Calculation of workcenter manpower requirements derived by dividing total manhours earned in Steps 4-6 by applicable Service Manhour Availability Factor (145).

$5678/145 = 39.$

Step 8. Refer to the whole manpower column of the standard manpower table (Appendix 3) for types and number of personnel earned.

The 39 manpower requirements breaks out as follows:

<u>Specialty Title</u>	<u>Number</u>
Provider	20
Clinical Nurse	2
Medical Technician	12
Administrative Support	5
Total	39