

Running Head: REFERRAL PROCESS IMPROVEMENT

Referral Process Improvement: A Study of the Efficiency and Tracking Processes  
for In-house Referrals at Blanchfield Army Community Hospital

By

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### Abstract

The purpose of this study was to evaluate the referral process from primary care managers (PCMs) to specialists at Blanchfield Army Community Hospital (BACH). Specifically, the study revealed key elements of an ideal referral process from the literature review and compared those elements with the referral process at BACH. Indicators were then developed to determine the efficiency of BACH's referral process. Statistical significance was found to exist in both the developed benchmarks ( $n = 1885$ ) of each indicator at the 95% confidence interval. Finally, recommendations for improving the referral process were made based on the detailed systems and data analyses conducted. These recommendations focused on PCMs' management of their impaneled patients and the referral process itself.

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## Chapter 1

### Introduction

The cost of healthcare in the United States has continued to rise over the past 60 years at rates greater than that of inflation. In 1996, healthcare costs represented approximately 14% of the Gross Domestic Product (GDP) (Gapenski, 1999). There are many reasons why healthcare costs have continued to rise at such a high rate:

1. The high cost of new technology and the use of this technology.
2. The growing percentage of the elderly population, which consumes large amounts of health care.
3. The high cost of malpractice insurance.
4. The high cost of physician education.
5. A third party payment system that removes the economic responsibility from the consumers of healthcare, resulting in over-utilization.
6. Medicare and Medicaid programs funded by the federal government.

Third party payment systems emerged in the 1920s and 1930s when the advances and costs in medicine and hospital care, along with the Great Depression, eroded the public's ability to pay for healthcare (Gapenski, 1999). Additionally, the government became the nation's largest third party payer when in 1965, it amended the Social Security Act and enacted Medicare and Medicaid coverage for the elderly and the poor.

The prevailing attitude of consumers, following the addition of Medicare and Medicaid was that when it came to healthcare, no cost was too great. In

response, insurance companies financed fee-for-service (FFS) reimbursement systems (Shultz and Young, 1997). These FFS payments included a specified amount paid to providers for each visit or procedure a patient received. Since a third party paid for the majority of this care, patients were removed from the financial impact for their treatment and continued to consume more and more care without regard to costs. This trend of rising costs continued during the 1970s and 1980s (Getzen, 1996). Additionally, the FFS system of payments offered no incentives for providers or hospitals to implement cost containment measures.

In an attempt to reduce costs, the federal government initiated a prospective payment system (PPS) in 1983. The PPS created diagnosis-related groups (DRGs) that reimbursed a predetermined amount to a provider. The system was designed to provide a financial incentive for discharging patients as soon as possible while preventing unnecessary procedures and tests. The reimbursement rates were established from the average cost required to treat patients with similar conditions. This system quickly modified hospital executives and physician behaviors, which resulted in a much more conservative approach to providing healthcare.

Unfortunately, while DRGs brought about some reductions in healthcare costs, the PPS did not sustain long-term reductions in healthcare costs. Instead, costs shifted from inpatient hospital services to outpatient services, thus increasing the total healthcare expenditures (Getzen, 1996).

In response to the ineffectiveness of these previous health care financing systems, the government implemented managed care. The concept of managed care according to Shultz and Young (1997), “embodies a direct relationship and interdependence between the provision of and payment for healthcare.”

Managed care attempts to link the delivery of care with the financing of the care.

While managed care plans are concerned with providing quality and accessible care, the fundamental function of managed care is to control the utilization of services (Kongstvedt, 1997). Rather than financing all care a patient or physician desired managed care attempts to reduce costs by providing necessary care only to those with valid medical needs. Arguably managed care stopped the escalation of healthcare costs. Several studies indicate that services delivered under managed care cost 10-20% less than those provided under indemnity insurance without a reduction in the quality of care (Getzen, 1996).

A central concept of managed care is an understanding of the population composition, specifically: demographics and the organization of provider networks, which assume responsibility and risks for this population. There are different models of managed care organizations that support this concept. The model designed to provide the stringent cost and resource control is a closed Health Maintenance Organization (HMO). HMOs combine health insurance functions with the healthcare delivery system in an effort to provide care in the most appropriate and least expensive setting. To do this, HMOs use a PCM who may be either a general medical physician, physician’s assistant, or a nurse practitioner to manage the care of a population of patients. These PCMs serve

as the entry point into the healthcare system by providing basic medical intervention and referring the patient to a higher or more specialized level of care, whenever needed.

By managing the resources used in the treatment of patients and, in particular, by preventing unnecessary diagnostic procedures and referrals, HMOs attempt to increase the access to and quality of care while reducing the overall cost necessary to finance the care.

Like the federal government, the Department of Defense (DOD) is a large purchaser of healthcare and experienced much of the same cost escalation as civilian hospitals and providers. In response to rising costs, medical combat readiness, and support of quality health care for its eligible personnel, the DOD introduced TRICARE. TRICARE is a regionally managed health care program for active duty and retired members of the uniformed services, their families, and survivors. TRICARE brings together the health care resources of the Army, Navy and Air Force and the networks of civilian health care professionals by providing greater access and a higher quality service while continuing the medical combat readiness. The goals of TRICARE are to:

1. Improve overall access to health care for beneficiaries;
2. Provide faster, more convenient access to civilian health care;
3. Create a more efficient way to receive health care;
4. Offer enhanced services, including preventive care;
5. Provide choices for health care; and
6. Control escalating costs.

The TRICARE program offers non-active duty beneficiaries three choices or plans for receiving their healthcare: Standard, Extra, and Prime. TRICARE Standard is a fee-for service option that permits beneficiaries to see an authorized or unauthorized provider of their choice but at higher co-payments, including an annual deductible. The patient pays the balance of the bill if it exceeds the allowable charge or if the provider is non-participating (up to 15% above the maximum allowable charge). TRICARE Extra is a preferred provider option (PPO) plan, which offers beneficiaries the choice of a doctor, hospital, or other medical provider listed in the TRICARE Provider Directory. There are some advantages to using Extra: 5% less co-payment than Standard, no balance billing, no enrollment fee and no forms to file. The third option, TRICARE Prime, is an HMO-type plan that requires beneficiaries to enroll with a PCM either at a local military treatment facility (MTF) or a participating civilian PCM. Beneficiaries must seek all their care from their PCM, or risk point of service indemnity whenever using a non-Prime provider. Prime is free for active duty members and their eligible beneficiaries, while retirees and their families must pay an annual enrollment fee.

On October 1, 2001, Congress enacted two new programs; TRICARE for Life and TRICARE Plus. TRICARE for Life is a secondary payer to Medicare for retirees over 65 years of age and TRICARE Plus is an MTF-specific program that enrolls retirees in a Prime-like program at the MTF by offering primary care benefits similar to TRICARE Prime.

The TRICARE Management Activity (TMA) administers the TRICARE program for all services of the military. The TMA operates the program through 12 Regional Lead Agents located at designated MTFs. Lead Agents are responsible for monitoring the operation of TRICARE at the MTFs and the managed care support contracts within their region. These contracts provide for healthcare services at MTFs where patient demand exceeds capacity. MTFs do provide the majority of care to the beneficiary population within their catchment area (a 40-mile radius) and the local managed care support contractor provides any care that the MTFs does not or can not provide their patients.

TRICARE Prime allows non-active duty beneficiaries to choose a primary care manager from a DOD organization or from a list of participating civilian PCMs. Active duty members do not choose from a PCM, rather one is assigned to them. In both cases, these PCMs are responsible for all treatment of prime beneficiaries. Once a patient's medical condition exceeds the capability of the his/her PCM, the PCM may refer his/her patients to specialists for further intervention or consultation. Tracking and managing these referrals and consultations represents an important issue for the MTF in resource utilization, patient access, and quality of care.

### **Conditions Which Prompted the Study**

Blanchfield Army Community Hospital is a 241-bed facility located at Fort Campbell, Kentucky. BACH is a subordinate MTF to the Southeast Regional Medical Command located at Dwight D. Eisenhower Medical Command, Fort Gordon, Georgia. BACH has a beneficiary population of approximately 87,000

people. Of those, approximately 61,000 are enrolled to TRICARE Prime to the MTF and approximately 4,000 are enrolled TRICARE Prime to the network.

BACH offers the services in Table 1.

Table 1

Blanchfield Army Community Hospital Capabilities

Anesthesiology	Psychiatry
Audiology	Psychology
Family Practice	Optometry
General Surgery	Oral Surgery
Obstetrics/Gynecology	Orthopedics
Internal Medicine	Allergy
Nutrition Care	Dermatology
Physical Therapy	Pathology
Podiatry	Pediatrics
Preventive Medicine	Pharmacology
Radiology	Social Work
Urology	Neurology

Currently, there are no credible measures or benchmarks in place to monitor or manage the referral process at BACH. The process utilized by BACH for managing referrals is based on old business processes and is not an effective mechanism for current or future success (Colonel Donald Gagliano, personal

communication 11 October 2001). The current system is neither efficient in tracking internal referrals from PCMs to specialists nor effective in tracking whether or not patients keep their referral appointments. In order to maximize resources and patient access, benchmarks must be developed and implemented (Lieutenant Colonel Keith Gallagher, personal communication, 15 October 2001).

A BACH goal is to become the preferred healthcare organization for its beneficiaries. Ensuring timely referrals is tantamount to beneficiary satisfaction and improving the referral process.

#### Optimize Services and Patient Outcomes

BACH must optimize services by using its specialists to their fullest capacity. This would preclude using civilian specialists for care BACH could provide at a lower cost. Improving referral tracking maximizes specialists' capacities and achieves current initiatives and trends, such as outcomes measurement, evidenced-based medicine and the effective utilization of resources. Additionally, specialty care rendered to the managed care support contractor patients favors the government in the bid price adjustments.

#### Effectively Utilize PCM by Name

BACH's primary care system uses the DOD program "PCM by Name" or "individual provider empanelment." PCMs however lack a tool to track and manage their referrals. Patients traditionally were assigned or empaneled to a clinic and not to any one provider. A recent Health Affairs directive now requires PCMs to manage the care of designated patients (Assistant Secretary of Defense, Health Affairs, 2000).

### Improved Regulatory and Accreditation Compliance

Through better referral process management, BACH intends to improve its compliance with DOD policies, Army policies, TRICARE access standards, and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards. Under the current referral processes, BACH does not meet several of the JCAHO Continuum of Care standards.

### **Statement of the Problem**

The referral process for TRICARE Prime beneficiaries at BACH reveals an inefficient referral management system. This causes provider and patient frustrations, lapses in the continuum of care and fiscal resources irresponsibility.

The following questions will aid in the development of the research process:

- How many days does it take to make an appointment once the specialist approves a received referral?
- For a routine referral, when does the 30-day requirement begin for a patient to be seen?
- Who is the approving/disapproving authority for referrals in the specialty clinics?
- What are the standards/benchmarks used to determine that a specialty clinic can or can not accept or deny a referral?
- What percentage of referrals are initially denied for any reason?
- Does the hospital meet the TRICARE standard for referrals?

## Literature Review

According to The Managed Health Care Dictionary, referrals and consultations are requests for additional care or medical information by a provider on behalf of a patient (Rognehaugh, 1998). Every physician, regardless of specialty, turns to another physician for advice at one time or another. This practice of referral and consultation became formalized as physicians specialized their training and limited their practices to a particular type of medicine.

Referrals are defined as a “temporary or permanent transfer of responsibility for a patient’s care from one physician to another” (Curry, Crandall, and Coggins, 1980). Consultations are defined as “a physician’s request for advice about a patient” (Curry et al., 1980). Although the lines between these two requests are often blurred, referrals and consultations are differentiated by the transfer of responsibility (Bourgeut, Gilchrist, and McCord, 1998).

### The Referral Process

According to McPhee et al., the typical referral process has five steps: (1) the referring provider, usually the PCM, and patient determine the need for consultation; (2) the referring provider communicates the reason and appropriate clinical information regarding the patient to the specialist provider, (3) the specialist evaluates the patient, (4) the specialist communicates all findings and recommendations to the referring physician, and (5) the patient, referring provider, and specialist determine whether or what further treatment is needed (1984).

Historically, the decision to refer a patient was based upon quality of care concerns or patient preferences, and providers paid little attention to cost effectiveness (D'Amaro and Thomas, 1989). Donohoe et al (1999) attempted to determine what medical and non-medical factors influenced referrals from generalists to specialists. Their five-month prospective survey found only 20% of referrals were influenced by purely medical reasons, another 3% by only non-medical reasons, and that 76% of all referrals were influenced by both medical and non-medical factors. Some of the top medical reasons cited in the study included getting advice about therapy, obtaining assistance with making a diagnosis, confirming a diagnosis, performing a diagnostic or therapeutic procedure, and learning more about treatment options. Non-medical reasons included meeting the community standard of care, acceding to the patient's request for referral, learning how to deal with similar cases in the future, obtaining assistance with patient education, and reassuring the patient or the patient's family that a serious disease was not present (Donohoe, et al., 1999). Donohoe et al. (1999) also found that a wide amount of variation existed in generalists' referral rates: 0 to 28.1 variations per 100 patient visits.

With the current dominance of managed care programs, cost containment has become an important concern in the referral process. Furthermore, the large variation among providers mandates hospitals review PCMs who over refer, reinforcing the need to monitor and control activities (Grembowski, Cook, Patrick, and Roussel, 1998).

### The Effectiveness and Efficiency of Referrals

Forest et al (1999) found that 50 conditions represented 84.3% of all referrals among pediatric patients. They suggested that these conditions be emphasized in primary care training curricula to reduce future referrals. Donohoe, et al. (1999) surveyed generalists and specialists over a five-month period and found that nearly one third of all referrals were inappropriate. The physicians in the study also identified nine factors that could have reduced referrals. These included more training in specific procedures, consultation with a trusted colleague, telephone consults with a specialist, the presence of a health educator, availability of clinical practice guidelines, longer visit lengths, computerized medical expert systems, MEDLINE search capabilities, and subspecialty texts (Donohoe et al., 1999)

Although these studies suggest that physicians who make inappropriate referrals may require additional training or support to reduce this behavior, not all researchers agree. Fertig et al. (1993) found that a high variation in referral rates among PCMs was not explained by inappropriate referrals. They concluded that the application of referral guidelines could help improve the quality of referrals but probably would not be useful in reducing the number of referrals to hospitals. They determined that a high rate of referrals does not necessarily imply a high level of inappropriateness. They concluded that in some cases, “good doctors refer more patients.”

In addition to these studies on reducing total referrals, researchers have also looked into the efficiency of the referral process. Some of these studies cite

communication between the referring provider and the consultant as the least efficient part of the referral process. Two of these studies exhort referring physicians to better coordinate care by providing more detailed written and telephone information to consultants (McPhee et al, 1984; Geyman, 1994). Curry et al (1990) found that using something as simple as a return mailer increased consultant feedback from 39% to 60%. Finally, Kinnersley (1999) found that in-house referrals to other PCMs often prevented questionable referrals and led to more satisfied patients. Their study found that 38% of referrals to specialists were avoided through consultation with other PCMs.

Other studies suggest that some inefficiencies are a result of patient behavior (Carland and Yudkowsky, 1992) because many patients miss their referral. In a four-month study of patients visiting a general pediatric office, Jones et al. found that less than half the patients actually appeared for subsequent referral appointments.

Finally, technological advances such as optical memory cards (Sakashita et al., 1996), telecommunications equipment (Perednia et. al 1998), and interactive voice response systems have improved the efficiency of the referral process (Barhoumy and Bitter, 1999).

### Managing Referrals

With so many concerns about the efficiency of the referral process, the management of the PCM referrals for consultation is a scrutinized aspect of managed care. According to Kongstvedt (1997), in the majority of managed care plans the cost associated with non-primary care services can be 1.5 to 2.0 times

greater than that of primary care services (1997). Since referrals can have such a large financial impact on managed care budgets, the referral process is a prime target for utilization control (Grembowski et al, 1998).

Targeting these referrals requires that managed care organizations capture utilization and cost data in an accurate and timely manner (Kongstvedt, 1997). According to Kongstvedt, “without this ability, any efforts to control utilization will be severely hampered” (1997). Once organizations capture their cost data, they can monitor themselves against these numbers and implement appropriate control measures. For managed care organizations, pursuing utilization control becomes a choice of employing either basic or stringent methods of referral management (Kongstvedt, 1997).

The two most basic methods of referral control include a PCM authorization system and the selection of providers on the basis of a demonstrated pattern of practice. Kongstvedt defines the former as PCMs approving their own referrals and is an essential element in managing referrals and consultant costs (1998). Without a PCM authorization system, managers cannot effectively control the referral utilization.

The second method for reducing referral expenses is to select providers on the basis of a demonstrated pattern of practice. Providers who tend to refer without authorization or perform procedures not requested or authorized should be excluded from referral decisions (Kongstvedt, 1997). By excluding these providers it avoids the “collusion of anonymity” (Rakel, 1995), which results when responsibility for the patient is lost between the referring provider and the

consultant. Moreover, irrelevant and costly inappropriate decisions and duplicate tests or procedures are discovered (Rakel, 1995).

In Essentials of Managed Care, Kongstvedt (1997) outlines some common methods used to achieve tighter control of the referral process. These methods include authorization for a single visit only, prohibition of secondary referrals and authorizations, review of the reasons for referral, limit of any self referrals, identify standards for referral forms and the use of case managers.

“Single visit authorizations” allow managed care organizations optimal control of referrals (Kongstvedt, 1997). Under this system, when a PCM makes a referral, he or she provides authorization for a unique episode of care. The authorization is good for one visit only and can be used for only one claim. Exceptions to the single visit rule usually include chemotherapy, obstetrics or mental health, but ultimately are predicted by the patients health plan (Kongstvedt, 1997).

A second method for achieving tighter controls involves the prohibition of secondary referrals, which prevents consultants from authorizing additional specialist visits. If a specialist chooses to refer the patient to yet another provider, he or she must provide the information back to the PCM, who will authorize this referral. This prevents unnecessary or even redundant referrals (Kongstvedt, 1997).

A third method used to tighten referral control is to have the medical director prospectively review all referrals (Kongstvedt, 1997). In reviewing the reasons for referral, the medical director or his representative applies specific

clinical standards. At a minimum, the referring PCM should document why the patient is being referred, what the PCM thinks the diagnosis might be and/or what he is concerned about, what has already been done and what exactly the PCM wants the consultant to do. Further, the PCM should indicate the results of his own work-up and/or significant findings in the patient's history and physical examination, thus making the consultant's job easier and more efficient (Kongstvedt, 1997).

Another method for increasing the efficiency of the referral process is using case managers. Case managers are specialists who manage the provision of services for patients with high-cost medical conditions and who receive care across multiple practice settings (Kongstvedt, 1997). By involving these specialists in the treatment of patients who have chronic and/or high-cost problems beyond the expertise of their PCM, costly episodes can be more efficiently and effectively managed.

Finally, to achieve tighter control, managed care plans limit their members' ability to self-refer to consultants. Many plans deny payment for any such unauthorized referrals. However, some managed care plans offer a point of service option that allow members access to specialists without PCM authorization, but incur a significant higher cost.

### **Purpose**

The purpose of this study is to examine the effectiveness and efficiency of the current referral process and to propose improvements to the PCMs and specialists conducting referrals at BACH. This is intended to assist the BACH

staff, Deputy Commander for Clinical Services, Chief, Department of Medical Services, and the Chief, Clinical Operations Division identify current indicators or benchmarks that will measure optimal performance. Moreover these results will facilitate appropriate decision-making concerning the referral process. This will be accomplished by evaluating BACH's current referral process with the best practices identified in the literature.

## Chapter 2

### Method and Procedures

Identifying inefficiencies in a complex system often requires a detailed review of the overall process as well as a detailed description of component parts to identify areas for improvement. An investigation of the process outlines the processes, participants, and data systems used to describe the interactions between these elements. Major components are identified and compared to available best practices and to common sense. The researcher then uses this information to provide recommendations for improvement to the process.

The methods and procedures to be used in this study will include a:

- review of current literature to determine optimal referral management elements;
- detailed systems analysis of the current referral process;
- descriptive analysis of the variables identified, and;
- list of recommended improvements to the referral process.

An assumption will be made for this study: the referral process includes both practices of referral and consultation but implies no transfer of patient responsibility from the PCM.

In performing a system analysis, data flow diagrams were developed initially to depict the current system at BACH (Appendices A and B). These diagrams identify the processes, entities involved, and the flow of data between entities. The researcher then outlined the process and identified those areas requiring improvement.

Once these diagrams were constructed and validated by participants, the researcher compared the results with those key elements or best practices of referral systems identified earlier.

Next, using the data flow diagrams, variables to be measured were developed. Table 2 shows the variables used in this study along with an operational definition that was used to measure the effectiveness and efficiency of the referral process at BACH.

Table 2

Indicators for measuring the effectiveness and efficiency of the referral process

Variable	Definition
Order	Date when the PCM completes a referral through electronic or standard written form.
Reviewed	Date the specialty clinic initially decides to accept or reject a referral.
Appointment	Date of the patient's appointment.
Order to Reviewed	Number of days from order to reviewed
Order to Appointment	Number of days from order to appointment

This author limited the scope of this part of the study to five specialty clinics in the hospital; orthopedics, urology, general surgery, neurology, and dermatology. Data were collected from the hospital's Composite Healthcare System (CHCS) and evaluated each clinic's referral process. The data collected in this study were analyzed utilizing the Statistical Package for the Social Sciences (SPSS). All statistical analyses use a 95% confidence interval for

interpreting results. Descriptive information was processed on each clinic's referral process.

This study collected three months of data from fiscal year 2002 (October 2001-December2001). Patient confidentiality was safeguarded/protected to ensure sensitive information about a patient was not released. For example name, social security number, and any other identifying data were not used.

Several hypotheses identified are:

$H_s$ : There is not a correlation between order to review time and the five specialty clinics.

$H_a$ : There is a correlation between order to review time and the five specialty clinics.

$H_s$ : There is not a correlation between order to appointment time and the five specialty clinics.

$H_a$ : There is a correlation between order to appointment time and the five specialty clinics.

Finally, based on the best practices outlined in the literature, recommendations were then made for an improved referral system.

## Chapter 3

### Results

#### Step 1: Literature Review to Determine Referral Management Elements

A literature review was conducted in order to identify the key elements or best practices or referral management systems. Most articles focused on ways to increase efficiency and control of referrals versus tracking referrals. Table 3 outlines the key elements of a referral management system.

Table 3

#### Key elements of a referral management system

Authorization for a single visit only
Prohibition of secondary referrals without PCM approval
Prospective review of referrals
Limited self-referrals
Referral form standards
Large case managers
Capture of utilization
Capture of cost data
PCM authorization system
Choose referral specialist based on demonstrated practice patterns
Utilize technology to improve referral tracking
Consult with other PCM on questionable referrals

## Step 2: Systems Analysis of the Current Referral Process

In performing a system analysis, data flow diagrams were developed to depict the current referral system at BACH. The data flow diagram format used in this study consists of three symbols: a square representing a process or activity, a rectangle for participants and an open ended box for data files whether paper or electronic.

The two referrals utilized at BACH are routine and urgent. These two processes are broken down further into subtasks to provide greater detail on the present process of referrals.

### Routine Referral Process

The tasks associated with this process are: determine the need for a routine referral; PCM prepares referral request/order; guidance to the patient; referral reviewed by specialist for medical appropriateness; book patient appointment; patient appointment; and feedback to PCM (See Appendix A).

Initiating a routine referral begins with a patient's visit to his or her PCM. During the course of the visit, the patient and PCM determine assistance is needed from a specialist. This assistance may be required to diagnose a condition, confirm a diagnosis, perform a procedure, or any other reason determined necessary. The PCM initiates the referral by entering the request electronically into CHCS. The electronic request is quite thorough. It includes: the requesting health care provider's name and clinic, number of authorized visits, reason for consult, provisional diagnosis, requesting location, priority and the patient's personal information. The PCM sends the request electronically

directly to the specialty clinic or to the Outcomes Management Division (OMD).

The request is only sent to OMD if the PCM does not know which specialty clinic the referral should be sent to or if BACH does not provide the care required for the patient.

Next, the PCM provides guidance to the patient on what he or she should do following the visit to the specialist. The DCCS at BACH allows the PCMs to determine if a phone call or follow-up visit is necessary. The most important aspect is to ensure the patient is kept in the process and understands the treatment process.

After guidance is provided to the patient, the referral is reviewed by a specialist to determine the medical appropriateness. When the referral arrives at the specialty clinic electronically, a paper copy of the referral automatically prints at the specialty clinic. Typically the appointment clerks, in each of the clinics, collect the paper copies into a folder. Some clerks log each referral received onto a tracking sheet to ensure accountability of the referrals. Next, a provider from the clinic reviews all the referrals generated for their clinic. If the referral does not contain enough information or does not require specialist intervention, the specialist will return the paper referral to the medical clerk who then returns the referral electronically to the PCM for additional information or action. If the referral is complete and medically appropriate, the provider approves the referral and returns the paper copy of the referral to the appointment clerk the following day for booking. The review process averages approximately 16 days in BACH. Depending on the situation and referral, the specialist will also list any test the

patient must have completed prior to the patient's appointment.

Once the specialty provider returns the paper referrals to the appointment clerk, the clerk attempts to book the appointment with the patient or returns the referral to the PCM. This is often the most difficult portion of the routine referral process because often the patient's personal data on the referral is incorrect or absent entirely. If the information is missing entirely the clerk sends the electronic referral back to the PCM with a note explaining why the referral is being returned. Most of the appointment clerks attempt to contact the patient at least three times to book the appointment with the patient. If the appointment is not successfully booked within 30 days, an electronic notification is automatically sent by CHCS to the PCM to let them know the appointment was not booked and that the referral has been administratively closed. Once a referral administratively closes, the PCM must rewrite the referral for the patient to get an appointment. Currently BACH does not have a policy on how many times the appointment clerks should attempt to contact a patient before returning the referral to the referring physician.

Having received approval and authorization for a visit to the specialist the patient and specialist meet for the specified amount of encounters. Upon completion of these visits, the specialist and the patient often discuss the results and findings of the specialist. The specialist should then prepare an electronic return consultation for the originating PCM. When the PCM receives the consultation, the PCM retains a copy for their files and a copy of the consultation is sent to the Patient Administration Division (PAD), who places it in the patient's

medical records.

After the visit, the patient initiates a follow-up visit with the PCM either telephonically or face-to-face. At that visit, the patient and the PCM review the consultation results and decide on further treatment if needed. Feedback to the PCM is a key part of the referral process. Feedback allows the PCMs to closely monitor the patients whom they have referred out for care.

Finally, PCMs within BACH informally communicate and educate each other about the types of referrals and patients they have seen. This is done both informally throughout the year and formally during academic day at the hospital.

TRICARE standards require that the clerks must make the appointment so that it takes place and that the beneficiaries are seen within 28 days from PCM issuance/order of the referral. Many of the clinics studied are able to see routine referrals within two weeks. The current system has many administrative requirements which cause many days to be lost before a patient can be contacted to book and appointment with a specialist.

If the specialty does not exist with in BACH or access standards cannot be met, the referral is sent to the TRICARE Service Center (TSC). The electronic referral is supposed to reviewed and released to the TSC within two business days. The TSC staff must load all referrals into the Total Managed Care System (TMCS) within five days from the date of receipt. TSC staff must make the appointment so that it takes place and beneficiaries are seen within 28 days for PCM issuance of the referral. The TSC then makes three attempts to call the patient to schedule the appointment. If after three attempts they still cannot

reach the beneficiary, an Automatic Letter Generating System (ALGS) letter must be generated and sent to the patient advising them to call for an appointment.

Once the appointment is made, the TSC must make an entry in both TMCS and CHCS in order to close out the referral and manually fax the SF 2161 to the OMD at BACH if not on the electronic referral system. Once closed out, an electronic notification will be automatically sent by CHCS to the PCM to let them know the appointment has been made. If the appointment is not made within 30 days, an electronic notification will be automatically sent by CHCS to the PCM to let them know the appointment was not made and that the referral was administratively closed.

The intent of administratively closing a referral is to alert the PCM that an appointment has not been booked for their patient. To avoid this from happening inappropriately, a referral must be processed within 28 days. PCMs get notification of administrative closures of CHCS referrals when: an appointment is not booked within 30 days; appointment is booked, but not kept within 45 days; or an appointment is deferred to the network and there are no results received within 90 days.

If the patient is on active duty, an attempt is made to send the patient to a Regional Medical Center (RMC), such as Dwight D. Eisenhower Army Medical Center (DDEAMC) at Ft. Gordon, Georgia. The use of these medical centers is limited since they fall outside of a one-hour driving distance standard set by the TRICARE program for Prime patients. Therefore, TRICARE Prime patients are not obligated to use these facilities. Active duty patients are not limited by this

standard. If a DoD facility is not available for the specialty care required by the active duty soldier, then the referral is sent to the TSC to locate a specialist. However if the patient's condition requires an appointment sooner, then the PCM initiates an urgent referral.

#### Urgent Referral Process

The tasks for the urgent referral process are: determine the need for an urgent referral, PCM contacts specialist, prepare urgent referral, guidance to the patient, book patient appointment, patient appointment, and PCM feedback (See Appendix B).

If during the course of a patient's visit with the PCM, the PCM determines that the patient requires specialty care within 24 hours, the PCM initiates an urgent referral. The PCM first identifies the type of specialist needed and attempts to contact the specialist at the clinic to determine medical appropriateness. The PCM then enters the referral request into CHCS instructs the patient to go to the specialty clinic. Once the patient arrives at the specialty clinic, either the on-call physician at the clinic sees the patient that day or the appointment clerk books an appointment for the patient the following day.

Finally, in order to complete the urgent referral process, the PCM should receive a return consultation from the specialist so that the PCM may determine if a follow-up visit or phone call with the patient is necessary to discuss the results of the specialist visit. Currently, PCMs receive few, if any, return consultations from specialist.

Step 3: Literature Review Comparison Results

Upon completion of the systems analysis, a comparison was conducted between the elements of referral systems in the literature with those elements present at BACH. The results are displayed in Table 4.

Table 4

Comparison of elements in literature and the present system at BACH

<b>Elements of Referral System in Literature</b>	<b>Present in BACH System?</b>
Authorization for a single visit only	Yes
Prohibition of secondary referrals without PCM approval	No
Prospective review of referrals	No
Limited self-referrals	Yes
Referral form standards	Yes and No
Large case managers	Yes
Capture of utilization	No
Capture of cost data	No
PCM authorization system	No
Choose referral specialist based on demonstrated practice patterns	No
Utilize technology to improve referral tracking	No
Consult with other PCM on questionable referrals	Yes

#### Step 4: Data Analysis

This study reviewed 1836 referrals that were ordered in the first quarter in FY2001. Initially 2691 referrals were considered for review. However, after screening for validity and reliability, 856 cases were eliminated from consideration because the data was incomplete. There are many potential reasons why approximately 32% of the data was incomplete:

1. BACH has an approximate 8-10% no show rate for appointments;
2. The events of September 11, 2001 caused many unforeseen problems throughout the hospital. Many appointments were canceled and for a brief time elective surgeries were canceled;
3. Duplicate referrals within the system.

This study analyzed two potential benchmarks or indicators to evaluate the efficiency of the following five specialty clinics in BACH; orthopedics, urology, general surgery, neurology, and dermatology. The two indicators developed are Order to Reviewed Time and Order to Appointment Time.

The first benchmark evaluated was Order to Reviewed Time. Table 5 below provides a descriptive analysis of the clinics studied for Order to Review time. General Surgery has the lowest average days of all the clinics with an average number of days being only 11.8 days.

Table 5

#### Descriptive analysis of order to reviewed time and the five specialty clinics

<b>Clinic</b>	<b>Number of Referrals</b>	<b>Mean</b>	<b>Standard Deviation</b>
Dermatology	435	52.1	39.8

Neurology	128	53.3	38.9
Urology	203	21.7	16.0
Orthopedics	721	24.1	28.3
General Surgery	348	11.8	6.6
Entire Hospital	1835	30.1	32.6

In order to test the significance of the order to review time by clinic, Table 6 show the results of the analysis for  $H_0$  which states: "There is not a correlation between order to review time and the five specialty clinics".

Table 6

Inferential hypothesis test of order to review time and the five specialty clinics

	<b>Df</b>	<b>F</b>	<b>Exact p</b>
Order to Review Time	4	66.4	.000

\*Note: Correlation is significant at the 0.01 level

Statistically significant results exist between order and review times and the five specialty clinics with  $n = 1885$ ,  $F = 66.4$ , and  $p < .000$ . Therefore, the  $H_0$  is rejected and the  $H_a$  that states: "There is a correlation between order to review time and the five specialty clinics " is accepted.

The second benchmark evaluated is order to appointment time. Table 7 below provides the descriptive analysis of the clinics studied for order to appointment times. The TRICARE standard for order to appointment time is 28

days. Overall the hospital's average number of days for order to appointment exceeds the TRICARE standard.

Table 7

Descriptive analysis of order to appointment time and the five specialty clinics

<b>Clinic</b>	<b>Number of Referrals</b>	<b>Mean</b>	<b>Standard Deviation</b>
Dermatology	435	52.1	39.8
Neurology	128	52.3	38.9
Urology	203	21.7	16.0
Orthopedics	721	24.1	28.3
General Surgery	348	11.8	6.6
Entire Hospital	1835	30.1	32.6

In order to test the significance of order to appointment time by clinic, Table 8 show the results of the analysis for  $H_0$  which states: "There is not a correlation between order to appointment time and the five specialty clinics".

Table 8

Inferential hypothesis test of order to appointment time and the five specialty clinics

	<b>Df</b>	<b>F</b>	<b>Exact p</b>
Order to Appointment Time	4	129.69	.000

\*Note: Correlation is significant at the 0.01 level

Statistically significant results exist between order and appointment times and the five specialty clinics with  $n = 1885$ ,  $F = 129.69$ , and  $p < .000$ . Therefore, the  $H_0$  is rejected and the  $H_a$  that states: "There is a correlation between order to appointment time and the five specialty clinics " is accepted.

## Chapter 4

### Discussion

#### Analysis of Strengths and Weaknesses

The literature review, construction of the systems analysis, and data analysis provided an opportunity to identify many strengths and weaknesses of the current referral process at BACH.

#### Strengths of the Current System

##### 1. PCM Education on Most Common Referrals

Current literature suggests educating PCMs on the referrals that occur most often. Although no standard data was collected, PCMs at BACH do share information amongst each other on top referrals and special treatments. Occasionally PCMs do request consultations from other PCMs at BACH, thus saving referrals to specialist.

Formal data collection of consultation results may further aid the PCMs in their consultation decisions. Too often, patients are seen by PCMs and unless the patient initiates a follow-up appointment or the consultation returns to the PCM, the results of the encounter go unchecked and uncollected. By tracking patient referrals and educating PCMs on consultation results, BACH PCMs may prevent additional referrals and increase patient satisfaction.

##### 2. Case Management

Case management represents another strength of the referral process at BACH. Case management at BACH is a clinical system that focuses on diagnostic related groups (DRG) identified as high volume, high cost, and high

users of limited resources. Some DRGs are mandated by Army Regulation to be case managed. The goal of case management at BACH is to optimize the patient's self-care capabilities, promote efficient use of resources, provide quality of care across the continuum and enhance the patient's quality of life.

In addition, the case managers at BACH track active duty soldiers that receive care in civilian facilities. The case manager is the link between the active duty soldier's unit, civilian specialist, and BACH providers. To do this, case managers follow the patient's treatment plan and assist the civilian facility in the coordination of the patient's return to BACH, his unit and his follow-up care.

### 3. Referral Form Standards

Referral form standards in this study were considered to be a strength but improvements are necessary. Standard referral forms decrease the likelihood of a referral being returned and will save the hospital money. All referrals should have a standard format that indicate why the patient is being referred, what the perceived diagnosis is or what they are concerned about, what has already been done, and what exactly the PCM want the consultant to do.

The electronic referral in CHCS provides the PCMs with a standard form to fill out and it provides all the recommended fields a referral should possess. Although PCMs in general provide most of the information, too often the personal information on the referral is incorrect. Without the correct personal information, it is very difficult to contact the patient to book an appointment. Referral standards also aid in prospective and retrospective reviews. Most importantly, referral standards may aid in return consultations. If a return consultation is

clearly requested versus implied, it is likely that the number of return consultations would increase.

### Weaknesses of the Current System

#### 1. Prospective Review

Prospective reviews are not being done on internal referrals. The DCCS does review those referrals being sent out to the network but little is done to evaluate the internal referrals. Internal referrals go directly from the PCMs to the specialty clinic. If during the review for medical appropriateness by the consultant, the specific form standards are not being met the referral is sent back to the referring PCM for clarification. This delay causes inefficiency in the system.

#### 2. Referrals Require PCM Approval

All referrals do not require PCM approval in the BACH referral process. Specialists are able to refer to other specialist within the system without involving the patient's PCM.

#### 3. Aggregate Referral Tracking

Perhaps the greatest weakness of the referral process at BACH is that there is very little actual referral tracking occurring. Referrals are generated by PCMs who ask their patients to make follow-up visits after their specialist visit. But, unless the patient makes this follow-up visit or the PCM receives a return consultation, the PCM does not track referrals on most patients nor does the PCM know if the patient made their appointment. As a result patients, not their PCMs or administrators, currently have the burden of tracking their referrals.

#### 4. PCM Feedback

Another significant issue is the lack of feedback to the PCMs. PCMs receive sporadic if any feedback from consultants regarding their patient's referral. PCMs are in need of tools that would help them manage their impaneled patient's referrals. Further research is needed to determine the optimal reports that could benefit PCMs but clearly there is a need for feedback to optimize BACH's current services.

#### 5. Multiple visits per single referral

In order for the tightest control or tracking of referrals Kongstvedt recommends a single visit per referral request (1997). PCMs are required to authorize all other requests. This would force PCMs to maintain accountability of patients, keep the PCM in the patient's care decisions at all times, and avoid open-ended referrals.

Contrary to Kongstvedt's recommendations, the PCMs at BACH are free to authorize as many visits as they deem necessary for their patients. Although this allows more flexibility, it may cost the facility extra money and keep PCMs out of their role as the patient's health manager. Even if the specialists are within the facility, there are financial implications of these referrals. Patients could receive expensive and scarce available care from a specialist that could be provided by the PCMs. Further, the responsibility for the patient may be lost between the PCM and the specialist, who may not view the patient as his or her responsibility.

#### 6. Lack of utilization captured.

One of the basic requirements for the control and the tracking of referrals, requires that a managed care plan be able to track the utilization of its referrals. In the current system, participants are collecting some of the utilization of referrals however many different systems are used. The data collected are more for accountability in case the referral gets lost in transition between offices.

These databases appear to fall short of their potential for improving the referral tracking process. There appears to be some utilization capture in the CHCS system that is not even used. The extent of this resource requires further investigation and could potentially provide information for better PCM feedback.

#### 7. No individual cost data captured

Another area of weakness of the current system is the lack of individual cost data capture. The current system provides little financial incentive or provider incentives for individual cost data capture. Under the current Revised Financing resource methodology, BACH is responsible for payment of care as an MTF for all care internally and externally at civilian clinics/hospitals. BACH must be able to show who received this care from civilian providers in order to reconcile bills from the contractor on a monthly basis. Inaccurate cost data capture can result in the loss of hundred of thousands of dollars if not properly tracked.

#### 8. Technology not used to improve the referral process

The system analysis showed that BACH might not be maximizing their technology advantages to improve the referral process. In addition, there is

some evidence to suggest that the MTF's medical information system, CHCS, has capabilities that are not being maximized. Further study is required to determine the extent of the systems capabilities in aiding the entire process.

## Chapter 5

### Conclusions and Recommendations

#### Recommended Improvements to the Referral Process

The following recommendations are based upon the research and systems analysis and the data analysis performed. In general, the recommendations follow two principles for improvement: PCM management of impaneled patients, and routine or urgent referral process improvement.

#### PCM Management of Empanelled Patients

BACH should mandate that all PCMs provide only individual referrals to better track all referrals on an individual basis. This will give PCMs a valuable tool to perform their daily job of managing impaneled patients, especially those referred to specialist. For example, a report that provides PCMs with a list of all their monthly referrals and the status of each referral: reviewed, booked, appointment made and appointment kept. This type of report would significantly aid PCMs in their empanelment responsibilities. This report should include all patient referrals regardless of whether they are referred to BACH or civilian specialists.

Secondly, by tracking these referrals, the BACH staff can use the information collected to maximize its available resources and avoid costly referrals to civilian specialists. If the improved systems are designed properly, the leadership could use the information to make strategic decisions regarding resource sharing agreements or even limiting specific services at the hospital.

Best practices and outcomes studies could be designed using the data

gathered. Once the data are collected and analyzed, the most efficient and effective PCMs could be identified. The leadership could educate other PCMs on how these providers operate.

As Forrest et al (1999) recommended, since the most common reasons for a referral in their study was to get advice from a specialist, using the top 25 referrals as education to PCMs may prove useful. By tracking referrals the medical staff can review the top referrals of all the providers and each individual provider. After collecting this information, the staff can create education programs that focus on appropriate or standard treatment for the top referrals, thus reducing referrals to specialists. Clinical Practice Guidelines (CPGs) are also a good way to reduce referrals to specialists. Currently BACH is utilizing several CPGs that have already shown to save money and improve the delivery of care to the patients. The consistent use of these CPGs should save money and optimize services but most importantly this may lead to appropriate care for the patient, reduce variation in outcomes, and increased patient satisfaction.

In addition, PCMs could be made aware of the costs of referrals by providing each PCM a summary of their monthly cost implications. This monthly report could include a list of the provider's top referred diagnostic tests, pharmaceuticals prescribed and top referrals to specialists. By providing this information to PCMs, they may become more cost conscious but more importantly variance in patient outcomes may be reduced.

In order to prevent unnecessary referrals to costly and busy specialists, PCMs frequently consult with other PCMs. Kinnersley et al (1999) found that

referring to another PCM is acceptable to patients and provides a candid and collegial means of addressing uncertain referrals. The practice of PCMs referring to another PCM is already occurring in BACH. PCMs should continue to educate each other on the results of their referrals and any common problems that might be occurring. Overall, BACH can improve access, quality and reduce costs by tracking referrals to the individual patient and provider level.

PCMs must adhere to the referral form standards in order to increase the likelihood of an efficient visit and return consultation. Specifics should address why the patient is being referred, what the perceived diagnosis is or what they are concerned about, what treatment has already occurred, and exactly what the PCM wants the consultant to do (Kondgstvedt, 1997). In addition, the number of authorized visits should be limited to ensure that the PCM is kept aware of the patient's medical situation.

PCMs should be the only ones authorized to approve secondary referrals. If a consultant wishes to refer the patient to another provider, that information must be provided to the PCM who is the authorization authority. This would prevent unnecessary or duplicate referrals.

Feed back to the PCMs is extremely important. Consultants must consistently provide feedback to the PCMs on the results of their patient's visit. This would allow PCMs to determine the need for a follow-up visit and the ability to proactively contact patients rather than having patients initiate a follow-up visit. This would reduce or save unnecessary appointments. Lastly, the PCMs could use the referral data gathered from the return consultations to educate

themselves on best practices and track their own referral patterns.

These recommended changes should reduce patient, provider, and patient frustration while saving time and money.

#### Referral Process Improvement

The leadership should review information regarding the referral process for continual improvement. Issues that could be researched include: Total referrals made by all PCMs, by type of provider, and by individual providers. The information gathered could be used to determine the best practices and aid in education programs for the PCMs.

Once data are collected on total referrals, the BACH leadership could then determine the hospital's referral rate. This rate can then be used as a benchmark against the national HMO average. This information will provide a basis to determine if PCMs are over or under referring.

#### Routine Referral Process

Routine referrals are the most common type of referrals at BACH. There are several changes that are recommended to the routine referral process. These changes include: Clerks verifying contact information, the use of technology, guidance to patients, and electronic review.

Patients gain access into the BACH medical system through the primary care and LaPointe Health clinics. The medical clerks in the primary care and LaPointe Health clinics must start each patient visit by verifying the contact data for each and every patient. Once a referral is reviewed and approved, the clerk in the specialty clinic cannot book an appointment if the contact information for

the patient is incorrect or not available. This verification will help prevent many referrals from being administratively closed and patients not being seen in the appropriate amount of time

Once a referral is ordered, technology should be utilized to improve the current system. Currently BACH uses the Interactive voice system to notify patients of upcoming appointments but the same system could be used to remind patients to call a specialty clinic to book an appointment if an appointment has not been made by a predetermined time. Also, the Internet could be utilized to book appointments, provide lab results, and provide feedback to the patient from both their specialist and their PCM.

Guidance provided to patients should also change. Rather than PCMs requesting that patients make a follow-up visit, PCMs should instruct the patient to wait a specific amount of time before initiating contact with them. This will allow PCMs to review results of the specialist visit and determine the appropriate course of action for the patient. Guidance should also be given to the patient to contact the specialty clinic within seven days of the referral being ordered to make an appointment. Medical clerks are often unable to contact patients for many reasons to book an appointment. If a patient were to call after a defined amount of time, the medical clerks could book appointments easier and time would be saved from unnecessary attempts trying to contact patients. This updated guidance will provide PCMs the ability to proactively manage their patients versus reactively managing them.

To save time and money all routine referrals should be reviewed for medical

appropriateness electronically versus on paper within 48 hours. The average review time for the BACH clinics studied was 30.1 days. The triage or on-call physician should review the clinic's referrals and approve or disapprove them electronically each day. The medical clerk can then conduct daily checks on CHCS to determine if the referrals have been reviewed to book an appointment with the patients. This will aid in the timeliness of the review process, reduce the amount of referrals lost or delayed, and save money in printing requirements by ensuring all the physicians review referrals electronically.

Finally, if an appointment cannot be made for the patients within 28 days of the order date, the referral should be immediately sent to the Referral Management office. The clinics cannot continue to hold onto referrals for fifteen to twenty days hoping to make an appointment for the patient after the 28-day deadline. Every day a clinic holds onto the referral, it is one less day the TSC has to make an appointment with in the 28-day standard for the patient.

#### Urgent Referral Process

The urgent referral process is extremely time sensitive. An urgent referral requires a patient to have an appointment with a specialist within 24 hours. There are only a couple of changes that are recommended to the current urgent referral process. The recommendations include: Physician-to-physician telephone calls for medical appropriateness, and change the guidance given to patients.

Once the referring health care provider determines the need for an urgent referral, the referring physician should immediately make telephonic contact with

the specialist to determine the medical appropriateness for the urgent referral. Some of the referring physicians at BACH do make the “physician to physician” telephone call to the specialist prior to sending the patient over to the specialty clinic. This must become standard practice to help ensure patients have “hassle-free” health care at BACH.

After the referring physician has written the urgent referral into CHCS, the guidance given to the patient is the next recommended change. The guidance currently given to the patients varies by both provider and clinic. As soon as the PCM completes the patient’s appointment, guidance should be given to the patient to immediately go to the specialty clinic that they have been referred to. Upon arrival at the clinic the medical clerk should verify the patient’s contact information and then a specialist should either see the patient that day or an appointment made for the patient the following day. The recommended change of guidance given to the patients would ensure the timeliness of urgent referrals and ensure our patient’s satisfaction with the urgent referral process.

#### Recommendations for Further Study

There are several areas that are recommended for further study. The first recommended area is to examine the external referral process at BACH. This study only examined the internal referral process and did not include all the referrals to specialist outside of BACH or referrals that come into BACH from network and non-network providers. BACH has the first right of refusal for all referrals. Examining the external referral process could identify unnecessary referrals leaking out into the network and could identify potential resource sharing

agreements.

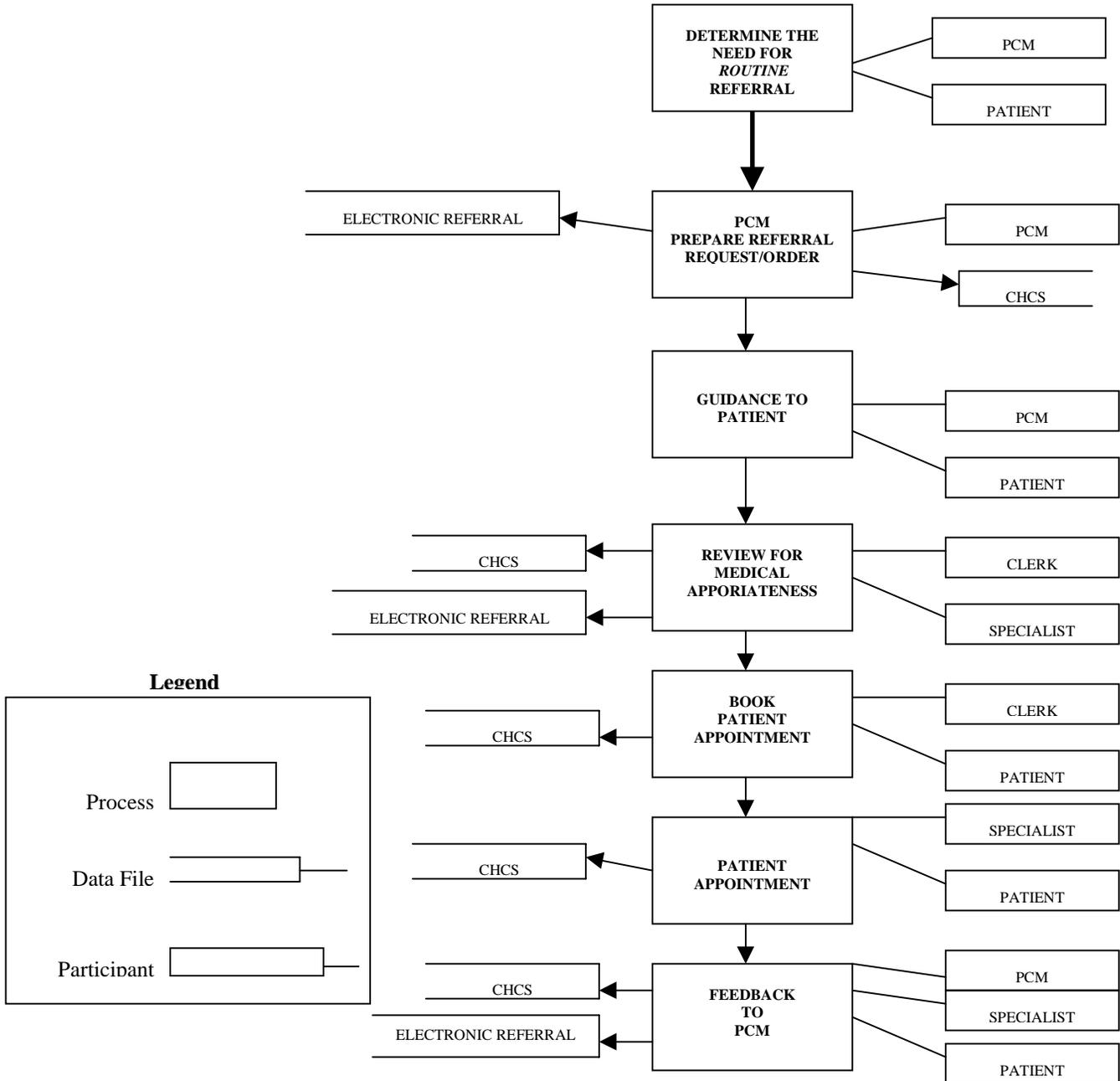
BACH is scheduled for implementation of the CHCS II system in the future. Research should be conducted to determine how best to implement this system to prevent potential problems with the referral process and how the system might solve current challenges.

### Conclusion

As the health care industry changes, system analyses must be conducted to improve the effectiveness and efficiency of our current delivery system. The referral process at BACH has many areas that require improvement. The two benchmarks studied appear to be viable and attainable benchmarks for utilization and to evaluate BACH's referral process. By optimizing the referral process at BACH, access, cost, and quality of care should improve. Implementation of the recommendations proposed in this study would assist the leadership at BACH to meet the health care challenges of today and of the future.

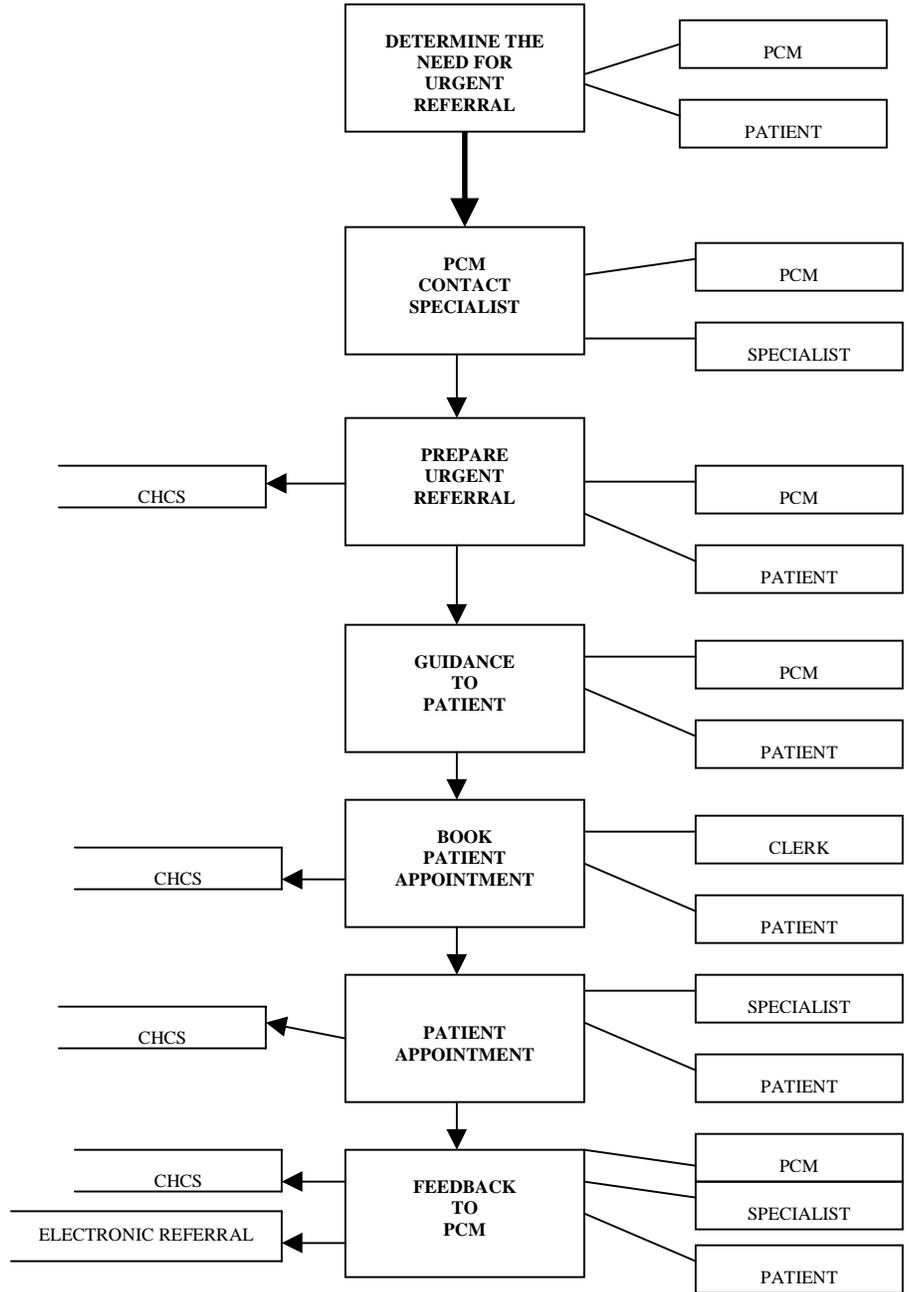
Appendix A

**ROUTINE Referral Process**

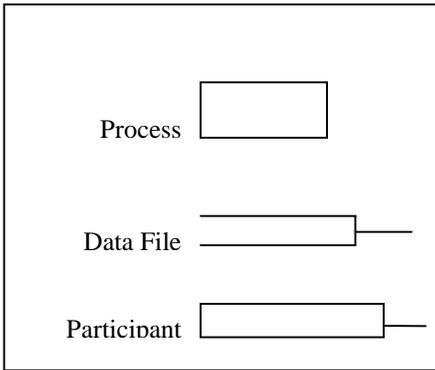


Appendix B

**URGENT Referral Process**



**Legend**



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