

Analysis of the Case Management Process at Walter Reed Army Medical Center:

Procedures for Improving Case Management

CPT Kevin S. Smith, MS, USA

U.S. Army-Baylor University Graduate Program in Healthcare Administration

Walter Reed Army Medical Center, Washington DC

27 May 2006

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

A Graduate Management Project Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Health Administration

20071101305

REPORT DOCUMENTATION PAGE

*Form Approved
OMB No. 0704-0188*

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 15-06-2006	2. REPORT TYPE Final	3. DATES COVERED (From - To) June 2005-June 2006
---	-------------------------	---

4. TITLE AND SUBTITLE Analysis of the Case Management Process at Walter Reed Army Medical Center: Procedures for Improving Case Management	5a. CONTRACT NUMBER
	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S) Smith, Kevin S.	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Walter Reed Army Medical Center 6900 Georgia Ave Washington, D.C. 20307	8. PERFORMING ORGANIZATION REPORT NUMBER
---	--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US AMEDD Center and School Bldg 2841 MCCA-HFB (Rene L. Pryor) 3151 Scott Rd Suite 1411 Fort Sam Houston, TX 78234-6135	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S) 31-016

12. DISTRIBUTION/AVAILABILITY STATEMENT

13. SUPPLEMENTARY NOTES

14. ABSTRACT

This study analyzed how the case management process has functioned at Walter Reed in terms of staffing, procedures, and organizational structure. The researcher conducted interviews with case managers from many areas, collected data from meeting notes, policies, regulations and patient records, and observed the users in the day-to-day operations of the case management process. The author determined there is a lack of written procedures for case managers to follow and communication failures are present. The lack of written procedures contributes to a variation of techniques within the process of case management for each section. The research also revealed a misinterpretation of the definition and responsibilities of a case manager. The key to maintaining and sustaining the continuity of any process in the Military Health System is a written protocol or policy that outlines the proper procedure for the process. Despite the lack of written procedures, the case management process at Walter Reed has provided care management to over 4,900 Operation Iraqi Freedom and Operation Enduring Freedom soldiers.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 44	19a. NAME OF RESPONSIBLE PERSON Smith, Kevin S.
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (Include area code) (202) 782-6698

Acknowledgements

I would like to thank a few of my classmates from Baylor. Their support and assistance over the last two years truly made this graduate program a great experience. I would also like to thank my preceptor, COL Calvin Williams, for his continuous support and encouragement during this research. His advice and recommendations provided me a greater understanding of the Military Health System. His mentorship provided many opportunities to experience the complexities of healthcare administration.

I would also like to thank all of the personnel responsible for case management at Walter Reed. Their role is critical in providing patients and family members with quality, efficient care management in a customer friendly manner.

Finally, I would like to thank all of the personnel at Walter Reed who played a role in the research process. They remained supportive and open to questions throughout this process. Without their help this graduate management project would not have been possible.

Abstract

This study analyzed how the case management process has functioned at Walter Reed in terms of staffing, procedures, and organizational structure. The researcher conducted interviews with case managers from many areas, collected data from meeting notes, policies, regulations and patient records, and observed the users in the day-to-day operations of the case management process. The author determined there is a lack of written procedures for case managers to follow and communication failures are present. The lack of written procedures contributes to a variation of techniques within the process of case management for each section. The research also revealed a misinterpretation of the definition and responsibilities of a case manager. The key to maintaining and sustaining the continuity of any process in the Military Health System is a written protocol or policy that outlines the proper procedure for the process. Despite the lack of written procedures, the case management process at Walter Reed has provided care management to over 4,900 Operation Iraqi Freedom and Operation Enduring Freedom soldiers. The researcher has included some recommendations to further improve the process of case management.

Table of Contents

Acknowledgements	ii
Abstract	iii
List of Tables	vi
List of Figures	vi
Disclaimer Statements	vii
Introduction.....	1
Conditions that Prompted the Study.....	2
Statement of Problem.....	4
Literature Review.....	6
Purpose.....	12
Methods and Procedures.....	13
Data Sources.....	13
Validity.....	17
Reliability.....	18
Limitations.....	18
Results.....	19
Major Finding.....	19
Terminology.....	19
Interviews and Observations.....	21
Discussion.....	27
Further Research	30
Conclusion and Recommendations	31

Conclusion	31
Recommendations.....	30
References.....	33
Appendices	
Appendix A. Proposed Conceptual Model of Case Management for Walter Reed	37 38
Appendix B. Example Clinical Pathway Template Worksheet	

List of Tables

Table 1. Qualitative Data Types.	13
Table 2. Case Managers Per Observed Section.	21

List of Figures

Figure 1. Case management model	7
---------------------------------------	---

Disclaimer

The views expressed in this study are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, Walter Reed Army Medical Center or the U.S. Government.

Statement of Ethical Conduct in Research

The author declares no conflict of interest or financial incentives in any product or service mentioned in this article. The confidentiality of individuals whose data may have been used in this study was protected at all times and under no circumstances will be discussed or released to outside agencies.

Analysis of the Case Management Process at Walter Reed Army Medical Center:

Procedures for Improving Workload Accountability and Organization

Introduction

Walter Reed Army Medical Center (WRAMC) is a 261-bed United States Army tertiary care facility located in Washington DC. It averages a daily inpatient census of 168 patients, services approximately 2,900 daily outpatient visits, operates 36 internal clinics, maintains oversight of three outlying Medical Treatment Facilities (MTF) and services a military beneficiary population over 83,000. Walter Reed Army Medical Center's mission is to provide "warrior care." Warrior care is a phrase WRAMC has recently inculcated into the organization as part of the Army's "Warrior Ethos" Philosophy (Shinseki, 2003). WRAMC defines warrior care as the ability to provide world class health care to injured soldiers and all eligible beneficiaries. The operational complexity of WRAMC presents many challenges for the leadership and staff in meeting this mission. The challenges create a demand for fundamental integration across all departments and services. A consistent collaborative effort throughout the organization allows WRAMC to operate effectively in providing health care to patients.

One component of the organization's health services delivery process that is critical to the continuity of patient care is care management and coordination. The increasing number of elderly patients and the steady inflow of wounded soldiers from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) provide a population of patients that need and deserve timely and effective care. The percent of persons over the age of 65 has more than tripled over the past 100 years. In the early 1900's approximately 4% of the United States population was 65 years of age or older, which equated to roughly 3.1 million persons. In 2000, the number was over 35 million, approximately 13% of the population (Shi and Singh, 2004). The total number

of over 65 beneficiaries supported by WRAMC is approximately 16,000 or 19% of the total beneficiary population. The number of OIF and OEF soldiers processed and treated through WRAMC as of October 10, 2005 is 4,850.

Conditions that Prompted the Study

Since September 11, 2001 the United States military forces have been in direct support of combat and humanitarian operations throughout the world, requiring multiple and continuous deployments. Currently, more than 275,000 service members are deployed worldwide to support national commitments on the war against terrorism as well as other endeavors (Winkenwerder, 2005). This large scale deployment of forces under wartime conditions creates daunting challenges for the Department of Defense (DoD) to maintain the operational status of soldiers and the provisions of long term medical care. Maintaining a high state of physical and mental readiness of our force has been identified as a priority to the continued success of the military overall. Commanders know that the health and fitness of their soldiers are critical indicators of the operational readiness of a unit, and that unhealthy personnel will compromise the ability of a unit to accomplish its mission (Wright, Huffman, Adler, and Castro, 2002). The need to address the mental and physical needs of soldiers in a wartime environment is at the forefront of media reports, political speeches, and military commanders' initiatives.

Sustained military operations in Iraq, also known as OIF, and Afghanistan, also known as OEF have generated approximately 337 patients for WRAMC suffering traumatic amputation(s). Many of these soldiers require a case manager for long-term care and follow-up services. In July of 2003, per a directive from the Army Surgeon General, the hospital commander at WRAMC directed that all OIF/OEF outpatients be case managed. At the time, approximately 150 OIF/OEF outpatients were being cared for at WRAMC. Twenty-eight care coordinators were

identified from across the Department of Nursing, Surgery, Neurology, Orthopedics, and the Department of Medicine to serve on four clinical specialty teams. The first specialty team focused on orthopedic patients, the second on surgical patients, the third on medical patients, and the fourth on psychiatric patients. The established specialty teams provided oversight and coordination of patient care for soldiers categorized into a specific team. Initially the process seemed to work well according to a documented After Action Report (AAR) dated October 3, 2003. Since then, several factors have compounded the process of case management. The number of severe trauma cases from OIF/OEF has increased, internal deployment of surgical and specialty providers at WRAMC have increased, permanent change of stations (PCS) continue, and the retirement of military and civilian staff has eroded the continuity of this vital wartime management initiative.

As operations in Iraq and Afghanistan continue, and a greater number of US Army Reserve (USAR) and Army National Guard (ARNG) Component soldiers receive orders to activate and deploy, an increasing number find themselves as patients at Walter Reed. The additional troop strength places a greater workload on military treatment facilities, especially the medical centers. Many of the smaller medical department activities (MEDDAC) are not equipped with the specialty services to initially treat soldiers suffering from a severe trauma injury, therefore the closest regional MEDCEN receives the patient. A study to analyze the workload and soldier readiness concerns posed by the influx of injured USAR and ARNG troops was conducted at Madigan Army Medical Center (MAMC) in 2003. "The routine workload of MAMC, like most of the AMEDD, has not decreased with combat deployments and, in fact, has increased with ARNG and USAR Soldiers and families" (Bingham, Birgenheier, and Meyer, 2005).

Statement of Problem

Walter Reed Army Medical Center appears to have multiple methods that outline the process of how to define, manage, and track patients requiring case managers. The failure to have consistent or all inclusive procedures may limit the continuity of care to beneficiaries. Additionally, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards state that hospitals must have a process to ensure a person's qualifications are consistent with his or her job responsibilities (Joint Commission on Accreditation of Healthcare Organizations, 2005); this is also a possible concern when assigning case managers at WRAMC.

The current organizational structure at WRAMC does not align the case managers under one central department. For this reason case management at WRAMC appears to be fragmented into many areas. Some departments have a nurse assigned as a case manager and in a few departments there are two. A question the researcher posited was do the assigned nurse case managers provide case coordination within their respective departments only or do they actual perform case management duties coordinating care outside of their department? Then there is the Department of Social Work which has three primary services: Behavioral Medicine Service, Behavioral Health Service, and an office of professional Education, Training and Research. The Department of Social Work dealing with primarily inpatient cases is the Behavioral Medicine Services. It is staffed with nine certified contracted social workers. In Fiscal Year 2004, the Department of Social Work experienced a workload of 19,100 patient contacts (WRAMC Department of Social Work, 2005). Case management also occurs in the Medical Holding Company (MEDHOLD) and the Medical Holdover Company of the Medical Center Brigade. The MEDHOLD is responsible for managing the disposition of the Active Duty outpatient population requiring further treatment and/or pending a medical board. The Medical Holdover

Company is responsible for the same process, except the population is strictly National Guard and Reserve Component soldiers.

As part of the Military Health System (MHS), service members with medical conditions that may affect military service performance and preclude retention must be presented to a Medical Evaluation Board (MEB) or a Military Occupational Skill Medical Retention Board (MMRB) to determine the future status of a service member and their ability to serve in the military. For this reason, MEDHOLD has eight contracted personnel to manage those soldiers pending a MEB. The eight case managers are a mix of social workers and nurses. They were funded as part of the Army Medical Command's initiative to manage the clinical and psychosocial needs of the large number of soldiers awaiting a MEB. WRAMC has no oversight or control over the managers assigned to the holding company. The current number of soldiers in MEDHOLD is 517 Active Duty and 216 ARNG/RC in the medical holdover company. Currently the average processing time for a service members' MEB is between 140 - 152 days. According to Army Regulation 635-40 (Physical Evaluation for Retention, Retirement, or Separation) the timeframe to complete the MEB process for a service member is between 40 and 90 days.

The research question for this project is: Does WRAMC lack case management procedures, policies, organizational structure, and staff to operate an efficient case management program? The key components of efficiency this study will analyze are the WRAMC staff requirements, the organization of case managers, the case manager credentials and the protocol that the case managers follow. An efficient case management system can minimize the length of stay, control the utilization of resources, and enhance the continuum of care between services. This study intends to define and improve the WRAMC procedures for case management.

Literature Review

The profession of case management is relatively new, although the concept has been around for many years. From the perspective of managed health care organizations, case management is a mechanism for improving the quality of care, reducing the waste of resources, and containing cost (Hawkins, Veeder, and Pearce, 1998). The Case Management Society of America's Board of Directors (CMSA) define case management as a collaborative process which assesses, plans, implements, coordinates, monitors and evaluates options and services to meet an individual's health needs through communication and available resources to promote quality cost-effective outcomes (Smith, 1995). An effective way to illustrate how a process is employed is to create a model. The case management process model utilized by CMSA is on the next page (*see Figure 1*). The model shows the process of case management as a continuous cycle revolving around the case manager and the patient (White, 2004). Case management can be a very stressful profession. Providing guidance and intervention on behalf of the patient, the provider, and the payer places case managers in the middle of an ever changing and increasingly complex health care delivery system. Case managers are the catalyst behind the education, coordination, and problem solving of each patient and family member involved in the process. This being said, case managers must possess a vast knowledge of the many disciplines within the health care delivery system. Case managers "need to be part general practitioner, part social worker, part psychologist, and part minister or rabbi" (Mullahy, 1998, p. 9).

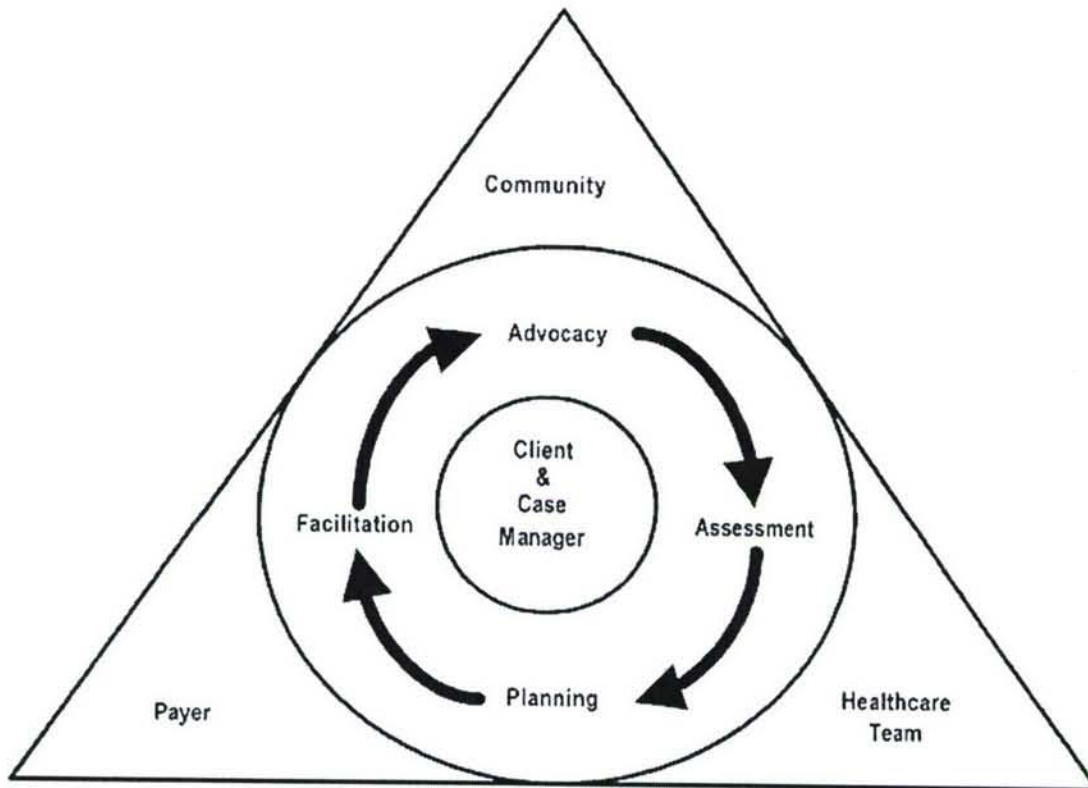


Figure 1. The case management model from the Case Management Society of America.

Typically case managers are categorized into two disciplines: nursing and social work (Mullahy, 1998). To help ensure efficient patient care, each discipline must understand the compliments that each has to offer. Many of the traditional models of health care delivery are unable to overcome some of challenges created by the aging population, the large shift from inpatient to outpatient care and cost containment through managed care. Case managers must assess, develop and implement a care plan, coordinate referrals, conduct follow-up assessments, while always keeping the patient's welfare a priority while minimizing the amount of resources used (Cohen, Cesta, 1993). According to the Certified Case Manager (CCM) Certification Guide (2005), six essential activities have been identified for the case manager: (1) assessment, (2) planning, (3) implementation, (4) coordination, (5) monitoring, and (6) evaluation. The guide further states that adhering to the standard practice of these essential tasks is crucial for the

growth of the profession and personal competence and expertise of individual case managers. Over the past several years however, the topic of qualification has been a subject of discussion. Many case managers have not obtained the qualification of CCM. The reality is that the competency level varies throughout the case manager profession, and regardless of their specialty, background certification is recommended (Siefker, Garrett, Van Genderen, and Weis, 1998).

Historically, nurses have served a greater capacity as case managers in the public health environment to reduce fragmentation of care. They have also served as consultants to insurance companies to assist in controlling costs (Hawkins, Veeder, & Pearce, 1998). In today's society the context in which nurse case managers are employed is much broader in scope. Nurses have an inherent ability to perform as case managers. The formal training a nurse receives provides a well rounded clinical background for managing clinical treatment and developing a plan for near term as well as long term care. Nurses also have the poise and bed side manners necessary to communicate and work with family members (Hawkins, et al., 1998). Social workers are valuable interpersonal case managers as well.

The National Association of Social Workers describes social work case management as a "method of providing services whereby a professional social worker assess the needs of the client and the client's family, when appropriate, and arranges, coordinates, monitors, evaluates, and advocates for a package of multiple services to meet the specific client's complex needs" (Hawkins, et al., 1998). Social work was originally designed to deal directly with a client to meet his/her personal and environmental social needs. Social work interventions have evolved to a more holistic approach to ensure the race, gender, cultural and socioeconomic background of a client and the client's family is evaluated in order to optimize the client's ability to recover from

their current situation (Hawkins, et al., 1998). Both nurses and social workers obtain attributes that contribute to the case management process. In many situations utilizing a collaboration of nursing and social work case managers can enhance the quality of service when managing the care of our elderly and traumatically injured patients.

The recent need for case management has been an evolving process. For a better understanding of how case management has evolved, one must look at the history of case management. One of the first organizations to employ the concept of case management was Liberty Mutual Insurance Company. In 1943, the company developed an in-house program as a cost efficiency measure toward workers' compensation. The program design had four goals: resolve medical issues, empower clients to make informed decisions, return the client to work or assess the ability of the client to return to work, and develop a vocational rehabilitation plan to assist workers' in maintaining job employability (Siefker et al., 1998). The goals of Liberty Mutual Insurance closely resemble the principle philosophy of case management. With the inception of Medicaid and Medicare in the 1960's, a more formal case management process evolved as a strategic component of managed care.

Over the past three decades, managed care, a system of healthcare delivery that tries to manage cost, quality, and access, has grown to become a prominent player (Gorin, 2003 and Kongstvedt, 2001). Health maintenance organizations (HMOs), seen as early as 1910, were the first major attempt at managing care and cost (Sullivan, 2002-2003; Kongstvedt). Before the 1970s, there was great opposition to HMOs from local medical societies and from consumers of healthcare (Kongstvedt). However, in 1973, Congress passed, and President Nixon signed into law, the HMO Act, 42 United States Code (U.S.C.) 300e, et seq. (Health Administration Responsibility Project, n.d.). It required large firms to offer HMO plans to their employees, and

it overrode state anti-HMO laws (Hyman, D. A., et al., 2004). Nonetheless, the United States continued to spend increasing amounts of its gross domestic product on healthcare. From 1980 to 2004, the percentage increased from less than 9% to more than 13% (Weintraub and Shine, 2004).

Because of these continually increasing costs, the 1990s brought major changes in the delivery of healthcare (Shi and Singh, 2001). One of the most significant changes in healthcare delivery was the shift from inpatient to outpatient care. The trend of hospice and nursing care outside of the hospital grew in response to the increasing number of persons over the age of 65, which reduced the need of inpatient care of that population for many hospitals (Shi and Singh). Another contributor to the shift in outpatient care is the advancement in medical technology. Providers perform many procedures that were once only done in an inpatient setting in an outpatient setting. The same technology initiatives that provide physicians the ability to provide more advanced care have drastically changed the face of care on the battlefield as well.

During World War II, 30% of the American soldiers injured died. In Vietnam the death rate from injuries decreased to 24%. The decrease in death rate from World War II to Vietnam is attributed to the use of air evacuation. Currently in Iraq, the percent of soldiers dying from injuries is about 10% (Gawande, 2004). The improved medical training for combat medics and combat lifesavers, improved tourniquet devices and wound dressings, and tactical use of Forward Surgical Teams (FST) and Combat Support Hospitals (CSH) have greatly improved the chance of survival on the battlefield (Fleming-Michael, 2004). Unfortunately, the conflicts in Iraq and Afghanistan have continued far longer than planned and the numbers of severely injured trauma patients are rising. The complexities of the trauma injuries from OIF/OEF create a long term recovery and rehabilitation process for those severely injured soldiers and their families

(Gawande, 2004). This has placed an increasing workload on several of the Department of Defense Medical Centers.

Walter Reed Army Medical Center is the primary medical center in the United States for receiving OIF/OEF soldiers and as of November 2005 received over 5,000 patients from both conflicts. These soldiers have sacrificed so much and deserve quality, efficient treatment and care management. One of the crucial links in providing quality, efficient care is the case manager. Case management studies have shown that applying suitable protocol for the patient's situation and assigning the proper manager to the case can increase care efficiency, provide better access to care and control health care treatment expenditures.

The Naval Hospital Charleston (NHC), in Charleston, South Carolina is an excellent success story of case management. NHC operates a nurse-managed wound care clinic (WCC) associated with the hospital's surgical service. The nursing leadership at NHC realized a need to implement a care clinic to manage cost, improve care across the continuum of care, and assist patients in returning to a self-care management situation. The nurse case management in the WCC has resulted in decreased costs, improved quality of care, faster healing time, and greater coordination of care between specialty disciplines. Two clinical cases, out of over 6,000 patient encounters, that showcase NHC's success are the treatment of a 75-year-old male with a non-healing leg ulcer and a 28-year-old male with a postoperative abscess (Crumbley, Ice, and Cassidy, 1999).

The 75-year-old male was being treated by a civilian general surgeon, but over the five month process the wound began to deteriorate. After several surgical grafts and hyperbaric oxygen treatments, costing over \$69,000, he was referred to the WCC. The WCC developed a care plan that resolved the wound within six months at a cost of \$7,000 (Crumbley, et al., 1999).

The 28-year-old male developed an abscess after undergoing surgery for a ruptured appendix. The surgeon left the wound open in order to prevent a further abscess. A bandage was developed by the nurse management team that would cover the wound and allow for proper drainage. After over night observation, the patient and family were given specific instruction on how to manage the wound and the man was discharged the next day and managed as an outpatient to resolve the wound. The ability to manage patient care from an outpatient status is a testament to the nurse managers and a well designed care plan (Crumbley, et al., 1999). Another case study conducted on pediatric case management in the Emergency Department (ED) proved to be effective.

Duveen Woolbright (1997), Director of Health Services at the University of South Carolina, conducted a study on pediatric case management in the ED. The study was designed to see if pediatric case management in the ED would reduce the average number of visits to the ED. The pediatric population tends to be one of the larger groups commonly seen in the ED. The study concluded many of the children who frequently used the ED for care are now able to be self-managed by parents at home for most illnesses (Woolbright, 1997). These study examples are just a small portion of many that support the need for case management.

Purpose

The purpose of this study is to review existing operating procedures, staffing requirements, case manager credentials and organizational structure of the case management process at WRAMC. Based on this purpose, the proposed hypotheses are as follows:

Ha1: The current case management process provides efficient procedures to care for the Soldiers and military beneficiaries.

Ho1: The current case management process does not provide efficient procedures for care.

Ha2: The organizational structure is sufficient enough to provide proper supervision over the case management process.

Ho2: The organizational structure is not sufficient enough to provide proper supervision over the case management process.

Methods and Procedures

Data Sources

The research method was qualitative. The researcher utilized an exploratory case study design. The design is used when uncertainty exists about a program's operations, goals, methods, or results and to safeguard against investment in larger studies when the determination of a problem is not well defined (Grosshaus and Chenlimsky, 1990). Litwin (1995) further states that a case study is used when the researcher explores a program, event, activity, process or individuals to collect detailed information using a variety of data collection procedures over a sustained period of time. The case management process is still developing in the Military Health System (MHS) and a comprehensive examination of existing data and processes at WRAMC has yet to be conducted to determine the programs efficiency in terms of organizational structure, credentialing, and operating procedures. This study method provided the researcher a strategy to investigate the process and still maintain the holistic characteristics of the process (Yin, 2003).

The data collection steps include setting the boundaries for the study, collecting information through defined measures, and establishing the protocol for recording information (Creswell, 2003). The primary types of data collected for the case study were a review of documentation and historical records, a limited tracer of patient records, semi-structured interviews and observations. The following data collection procedures for this qualitative study are defined by Creswell:

1. Interviews- The researcher conducts face-to-face or telephone interviews with participants. These interviews involve structured or semi-structured open-ended questions that are few in number and intended to elicit specific views, information, or opinions from participants. Information collected from the interview will be handwritten and then transcribed to type as deemed necessary.

2. Document Collection- These may be public documents such as official reports or existing research studies; or private documents such as personal journals, emails, or other correspondence. Notes collected will reflect key information about the document or other material and will be designated as (a) primary material that has been taken directly from existing research or secondary material or (b) secondhand accounts written by others.

The following table discusses the advantages and limitations of Creswell's method.

Table 1

Qualitative Data Collection Types

<i>Data Collection Type</i>	<i>Options Within Type</i>	<i>Advantages of the Type</i>	<i>Limitations of the Type</i>
Interviews	<ul style="list-style-type: none"> • Face-to-face • Telephone • Group 	<ul style="list-style-type: none"> • Useful when participants cannot be observed directly • Participants can provide historical information • Allows researcher control over the line of questioning 	<ul style="list-style-type: none"> • Provides indirect information filtered through the views of interviewees • Researchers presence may bias responses • People are not equally articulate and perceptive
Documents	<ul style="list-style-type: none"> • Public documents • Private documents • E-mail discussions 	<ul style="list-style-type: none"> • Enables a researcher to obtain the words of participants • Can be accessed at a time convenient to the researcher • Represents data that are thoughtfully compiled by participants • As written evidence it saves the researcher time in transcribing 	<ul style="list-style-type: none"> • May be protected information not available for private or public access • Requires the researcher to search out the information in hard-to-find places • Requires transcribing or copying computer entries • Materials may be incomplete • Documents may not be authentic or accurate

The study intended to identify whether the current process for case management is efficient under the current staffing, organizational structure, credentialing and operational policies implemented at WRAMC. The use of tracer methodology was applied to follow a patient through the continuum of care to observe the effectiveness and efficiency of current operational policies. The researcher attempted to conduct a randomized chart review and analysis of a sample population of severe trauma patients consisting of 50 OIF/OEF traumatic amputations to trace the management process. A sample size of 50 is representative of the total 337 OIF/OEF traumatic amputee patient population seen at WRAMC. A director from the amputee center assisted in assessing and reviewing the selected records in order to maintain confidentiality. The screening criteria used to determine the study population was soldiers with two amputations above the elbow and/or knee. The amputations may be a combination of both arms, both legs, or one arm and one leg. The chosen criterion presents complexity for case managers to coordinate, track and plan for possible long-term care.

Cases were reviewed from the timeframe of January 2003 through October 2005. Some injured soldiers from OIF/OEF were received by WRAMC before 2003, but considering many of the case managers were not staffed until late 2002 and early 2003, the case review timeframe will begin in January 2003. The end of the review timeframe was established to ensure the reviewed cases had progressed through treatment to the physical state of rehabilitation. The information collected during the chart review intended to include the case manager(s) background (i.e. social work, nurse, or administrative), the number of case managers assigned to each patient and how many appointments were kept by the patient after coordination had been made during the course of treatment. The chart review and analysis encountered some

confounding factors that prevented a complete records review of the intended sample. The confounders will be discussed later in the observation section.

Semi-structured interviews were conducted with case managers in a number of different work areas in order to collect the required qualitative data. The work areas chosen for the study included Patient Administration (PAD), specifically chart review and analysis; two different clinics; and random case managers from the Department of Nursing and Social Work. The clinics included in the study were orthopedics and neurology, which primarily treat the study population. Prior to OIF/OEF both departments developed standardized clinical pathway treatments for the patients in each respective clinic to ensure proper care and rehabilitation. Since OIF/OEF the severity of the trauma patients are more complex and in many cases the two clinics are not able to use those same standard clinical pathway metrics. Personnel in each area were interviewed to determine (a) individual knowledge of the case management process along with its strengths and weaknesses and (b) what steps of the current process are/are not being followed. The questions that were asked were:

1. How long have you been a case manager? How long have you worked here at WRAMC?
2. What criterion determines which case manager is assigned to a patient's case?
3. How are appointments made for OIF/OEF patients with case managers? How long do those soldiers wait to get an appointment?
4. Are there specialty teams available to discuss patients who need multiple procedures from more than one specialty?
5. What are some of the common obstacles/factors you encounter that cause an appointment time to be rescheduled?

6. What type (verbal, written, electronic, etc.) and how often do you communicate with the patients and/or other assigned case managers?

7. What training do you and your staff receive regarding the care management process of OIF/OEF trauma patients? What are your credentials? How do you document this training?

8. Are there any challenges to tracking and maintaining continuity of all procedure documentation regarding a patient case when multiple providers/case managers are involved? What are the challenges?

In addition to the structured interviews, the day-to-day operations of the personnel working in the orthopedic clinic, the neurology clinic, and the nurse/social work managers were observed. Approximately two to three days will be spent in each area in order to evaluate the entire management process. The researcher plans to follow the patient record from the start of the process at check-in, until the discharge and completion of care provided here at WRAMC, paying particular attention to the data listed earlier in the section.

Validity

Before a study can be useful, the credibility of the study must be determined. Measures of validity and reliability must be established. Creswell (2003) states that “validity is seen as a strength of qualitative research, but it is used to suggest determining whether the findings are accurate from the standpoint of the researcher, the participants, or the readers of an account” (p. 195). In a qualitative study, the credibility depends more on the information gathered and the analytical skills of the researcher and less on statistical elements. A qualitative study does not have a statistical test for significance, therefore the burden of discovery, interpretation and findings rest solely with the researcher (Hoeplf, 1997).

The most common types of validity are internal and external. Internal validity establishes a causal relationship, whereby certain conditions may lead to other conditions, as distinguished from spurious relationships (Yin, 2003). Internal validity is not intended for an exploratory study, but to draw proper conclusions and create useful recommendations the researcher gained validity through the use and comparison of multiple documents and interviews.

External validity defines the domain to which the study's findings can be operationalized. This study focuses on the case management of OIF/OEF trauma patients at WRAMC. WRAMC is resourced with numerous specialty care clinics, multiple directorates and departments that either directly or indirectly impact the case management process. By taking into account the multiple service lines that interact in case management, this study provides useful information to improve the case management process at WRAMC.

Reliability

Reliability is a measure of consistent results when the process is duplicated under a set of standard conditions. The researcher established reliability through the use of historical documentation and interviews of senior case managers. Some of the researcher's findings had previously been annotated in earlier documentation. Future reliability can be supported by existing conclusions and recommendations provided by this study.

Limitations

As this study was conducted primarily utilizing qualitative research methods, some limitations must be addressed. The data collection for this study was dependent upon the cooperation of those individuals involved in the process. Case studies, observations, document analysis were susceptible to the author's biased interpretation. The interview sessions may also be limited by the recall bias of the personnel being interviewed. The questions selected for the

interviews were asked to elicit specific feedback and to allow the individuals being interviewed to give more comprehensive answers. The questions were designed to outline the steps case managers take during the course of a patient's care. The premise behind outlining the steps was to note inconsistency in management procedures. The collection of meeting notes, historical documents, and interviews assisted the researcher in assuring the findings were valid.

Results

Major Findings

The most significant finding of this exploratory study was the lack of a standard operating procedure (SOP) for case management here at WRAMC. According to earlier documentation, an attempt to establish a standard operating procedure was performed by Lieutenant Colonel (LTC) Sherie Haga-Hogston, Chief of Ambulatory and Pediatric Nursing; however, only a part of a draft document could be located. Each section of case managers did have their own protocol and procedures, but the variation in procedures can sometimes cause coordination issues. The second major finding was the fragmented organization of the case managers. The Walter Reed Army Medical Center employs over 34 case managers throughout the hospital. The 34 belong to the Orthopedic Clinic, Neurology (TBI), Department of Social Work, and the Nurse Discharge Planning section. There are other case managers in the facility, but the focus of the observations and interviews occurred in these areas. Lastly, during the interviews it was apparent that there is no formal case management program and no process to provide professional training opportunities for the various managers.

Terminology

During the research of the case management process it became evident that there were multiple interpretations of the responsibilities and definition of a case manager. The current

perception among the case managers as to their roles and responsibilities is one of confusion. The term case manager appears to be a catch-all word. As mentioned earlier, the Case Management Society of America's Board of Directors (CMSA) defines case management as a collaborative process which assesses, plans, implements, coordinates, monitors and evaluates options and services to meet an individual's health needs through communication and available resources to promote quality cost-effective outcomes (Smith, 1995). Based on this definition, many of the case managers assigned at WRAMC actually act in other capacities.

The researcher observed three categories of management during this study. Out of all the sections interviewed and observed, each exhibited characteristics of this definition, but the Department of Social Work and the Medical Hold section appeared to have greater internal and external coordination across the spectrum of services. This is due in part to the recent oversight of the Department of Social Work with respect to the case managers in the Medical Hold section. The other departmental case managers are only involved in a patient's case if the patient is referred for an appointment or if the patient is an outpatient receiving care primarily from that specific department or clinic. This method of operation is nothing more than a care coordinator or an appointment scheduler. Then there are the discharge planners. A discharge planner is an individual who assesses a patient's need for treatment after hospitalization in order to help arrange the necessary services to affect the timely discharge of the patient (Mullahy, 1998). The only apparent distinction in job title is with the discharge planners. The discharge planners work under the Department of Health Plans Management and provide services based on referrals. The care coordinator/appointment schedulers however are described as case managers by their job descriptions. Walter Reed must operationalize the role of case management, to include how

nurses, discharge planners and social workers are defined. Recommendations to better define the responsibilities of the case managers are discussed later.

Interviews and Observations

The command leadership of WRAMC expressed a desire to improve the case management process; however, soon after the researcher began the study it became apparent that there was a general lack of understanding on how the process worked. Both the hospital leadership and some case managers were unsure as to the roles of certain assigned case managers. Case management operations appeared fragmented and poorly organized. There is currently no structured chain of command or organizational structure solely for the case managers. The researcher conducted observations and interviews with personnel involved with case management to establish an understanding of the process and in doing so, identified a few ways to improve the process. The areas interviewed and observed with case managers are depicted in Table 2. The staffing numbers for case managers across WRAMC appeared adequate to handle the current workload, so not all clinics with case managers are listed, but for the purpose of this study the researcher focused on the areas in Table 2.

Table 2.

Case Managers Per Observed Section

<u>Section/Clinic</u>	<u>Case Managers</u>
Orthopedic and Rehab	6
Neurology (TBI)	3
Medical Hold	5
Medical Holdover	8
Social Work	9
*Medical Management	3
<u>Total</u>	<u>34</u>

Note. * Identifies location of discharge planners

Records Review

Part of the original intent of the methods of analysis was to randomly select 50 records of multiple amputee patients in order to collect data pertaining to appointments and case manager intervention. A few confounders prevented a complete review as the research originally intended. First, WRAMC does not institute a closed medical records system. A closed medical records system ensures the facility maintains the accountability of all medical records. Due to the large National Capitol Region service area, patients maintain their own medical record. The second confounder was a lack of continuity files kept by each department. Some departments maintain continuity files on patients, but the file only reflects the care provided by that specific department. Both of these issues prevented access to paper records. Access to electronic medical records was available, but not all of the patient records have been screened into the electronic database. WRAMC only began implementation of the new Composite Health Care System II, which is responsible for storing and capturing medical records electronically for Department of Defense military health facilities, in August of 2005.

The researcher also noticed as an observation that many of the follow-up appointments for OIF/OEF are conducted on a walk-in basis, which means even with access to the automated appointment system and electronic records, the research would not be able to accurately track appointments made. The researcher was able to review seven records of multiple amputee patients encountered while conducting the study. Each soldier is currently in an outpatient status. Fortunately, they allowed the researcher access to their appointments. Of the seven, the researcher identified three with at least one missed appointment and one of those missed two appointments. Two of the missed appointments were due to poor communication between the

case managers and the two patients, one was due to the soldier being on convalescent leave out of town, and the last missed appointment occurred because the soldier forgot about it.

Social Work

The Department of Social Work section that assumes the initial case management role when a soldier from Iraq or Afghanistan arrives at WRAMC is the Behavioral Medicine Service (BMS). The mission of BMS is to “meet medically related social and emotional needs of patients and their families that impinge on the patient’s medical condition, treatment, recovery, and safe transition from one level of care to another” (WRAMC Department of Social Work, 2005). The BMS primarily manages the patient while he or she is an inpatient. The case manager from BMS conducts an evaluation of the patient based on established protocol and works with the assigned physician(s) to coordinate a treatment plan. Simultaneously, the case manager works to accommodate and provide information to the service members’ family. The case manager also facilitates the transition of a patient from inpatient status to outpatient or discharge status. The social work case manager may still be engaged in a case once the patient becomes an outpatient, if social work intervention is requested by the new case manager. Once the patient is transitioned to an outpatient status, the continuum of care does not end.

Orthopedics and Rehabilitation

The Department of Orthopedics and Rehabilitation has a two fold mission. The first mission is to treat and repair the orthopedic condition. As of January 1, 2006, over 1,200 orthopedic cases had been treated from OIF/OEF with 337 of these cases being traumatic amputations. Many of these cases are referrals from Iraq and Afghanistan needing orthopedic care unavailable in theatre and are expected return to duty with two-six weeks of treatment. The amputees however require more intense, long-term care for rehabilitation. This is where the

second mission begins. Once treatment is completed, rehabilitation begins immediately. The rehabilitation services are provided through physical therapy (PT), occupational therapy (OT), and physical medicine. The rehabilitation process on average is 6-18 months depending on the type of amputation(s). During this lengthy process, the patient is assigned a case manager from the department to supervise, mentor, and coordinate the rehabilitation of the patient. Depending on the extent of rehabilitation required, case managers many times use various methods and techniques to complete the rehabilitation process. Certain standard procedures are used in all cases, but no written guidelines, pathways, or algorithms are available to clearly show and define and path of treatment. After interviewing with random amputee patients in OT/PT the researcher received many positive comments on the management of rehabilitative care. Another area where pathways are very flexible is in the Department of Neurology.

Neurology (TBI)

The Department of Neurology operates in the same manner as orthopedics and rehabilitation with a few small differences. Case managers in neurology have defined clinical pathways to follow for certain neurological conditions, but many of the OIF/OEF patients have injuries that tend to deviate from some of the standard pathways. The case managers from neurology may be involved in the case as soon as the patient arrives if the primary injury is determined to be a type of traumatic brain injury (TBI). When this occurs, the BMS and neurology case managers must coordinate to prevent any delays or disruptions in care. During this situation, the social work case manager should still be the lead manager. Communication and coordination conflicts do arise. The researcher noted on a few occasions that the clinic made coordination for patients without going through the lead case manager at the patient's request. The appointments made were for neurology issues and the clinic determined the appointments

were needed. Further interviews with the neurology case managers revealed a consistent, streamline of transitioning patients into rehabilitation. The TBI patients too severely injured to go through rehabilitation, whether in the short or long-term, here at WRAMC are placed into a Veteran's Administration (VA) facility or equivalent civilian facility based on the soldiers home of origin. The placement is a coordinated effort between social work, neurology, the VA or equivalent civilian facility and the patient's family. Those that remain at WRAMC for rehabilitation are assigned to the Medical Hold or Medical Holdover Company.

Medical Hold/Medical Holdover

While a patient is in an outpatient status awaiting a medical board or going through rehabilitation, he/she is assigned to the Medical Hold or Medical Holdover Company for accountability and administrative oversight. As stated earlier, active component service members are assigned to the Medical Hold Company and the National Guard and Reserve component service members are attached to the Medical Holdover Company. When rehabilitation is complete, the service member is evaluated by a Medical Evaluation Board to determine if the soldier is still in accordance with Army standards. If not, the case will be referred to the Physical Evaluation Board to determine if the service member is fit for duty and also to determine the percentage of medical disability in the case of a medical discharge. Soldiers do have the option to appeal both processes. Currently, over 700 soldiers are assigned or attached to the medical companies awaiting disposition. This statistic is reported weekly to the Army Medical Command Headquarters and has received a great deal of scrutiny over the past two years. During interviews with the case managers from the medical companies it became apparent that many confounders contribute to the high number of soldiers awaiting disposition. A lack of written standard operating procedure for case management and a lack of formal

supervision from a senior or lead case manager are two issues the researcher discovered. The researcher did observe the use of regulations and policies for the MEB and PEB process. The case management of OIF/OEF patients is a very visible and important task. Lack of written protocols, high numbers of soldiers awaiting disposition and poor communication on occasions present a negative impression toward the case management process in the Medical Companies. Fortunately, the researcher found that case management was not the major confounder contributing to the large number of soldiers awaiting disposition. The medical record review and physical evaluations are lengthy processes, especially when a soldier has multiple conditions that need to be reviewed.

Communication

Case management is a person-to-person service, and open pathways of communication must be laid for good interaction. To communicate effectively between physicians, patients, families and other necessary entities, case managers must recognize the obstacles to communication and strive to overcome them. During the researcher's observations a couple of key barriers were evident.

Interview subjects in each area could verbally articulate how they manage and care for their patients, but the lack of written protocol made it difficult for the researcher to evaluate and compare the processes. The researcher also noted a difference in how case managers communicate with patients. There are many modalities for communicating in today's society. Electronic mail, video teleconferencing, pagers, cell phones, web portals are just a few of the many methods. The more experienced case managers and providers that have worked in the Walter Reed Health System for more than 10 years are very resistant to some of the new methods of communicating. "Nearly everyone feels ill-equipped for the technological

requirements of simple communication, especially academics that are more afraid of admitting it than most” (Keigher, 2000, p.227). The hesitation to use modern technology provides the manager greater assurance because of the face to face interaction, but it reduces the timeliness required to manage the current workload. On the other spectrum, are the managers that rely almost completely on electronic communication. Unfortunately the researcher observed instances where the case manager and patient communication broke down through the use of electronic mail and telephone conferences.

Discussion

The overarching concern the researcher revealed during the interviews and observations was a lapse of continuity, caused by a lack of written protocol and organizational oversight. The nature of the military environment is one of constant turnover. Walter Reed is no different. While many physicians remain at the hospital 10 to 20 years, the administrative and nursing staff rotate every two to three years. Twenty-six of the case managers are civilian employees, but even civilians are susceptible to turnover. Over the past three years, many case managers from the Medical Hold and Holdover have gone through the turnover process. Even some of the case managers assigned to the separate clinics have dealt with turnover as well. Personnel turnover makes the requirement for a standard operating procedure (SOP) imperative to maintain continuity of the case management process. The SOP should include a conceptual model for the case management process as well as the clinical pathways necessary to address the respective patient’s diagnosis.

A conceptual model provides a visual picture of how the flow of patient management works. Conceptual models and diagrams are useful mechanisms toward maintaining standardization and continuity of the process. Mapping a model for case management starts with

the initial encounter of the case. Once a patient is identified, a case manager should assess the patient's case within 24 hours to determine if services are required. If services are required the case manager begins a patient assessment followed by a more comprehensive assessment of factors surrounding the patient, such as family needs, benefits and other possible special needs. The case manager then consults with the providers and other interdisciplinary team members to develop goals and a treatment action plan. The next step is to implement the treatment plan. The key to implementation is clear communication to the caregivers involved in the treatment process. Each person involved must understand the treatment plan. The responsibility of the case manager is to conduct continuous coordination and follow-up while monitoring the course of treatment. During the follow-ups, the case manager should evaluate goal accomplishment, patient satisfaction and timeliness of treatment. In doing so, the case manager may identify areas of treatment that may need modification or revision in order to maintain the best continuum of care possible for the patient. Eventually the case manager will reach a point where treatment is complete and the patient requires no further services. When this time occurs, the case manager should assist in establishing any long-term care needs and providing the patient and family with any required or requested information regarding future care of the patient. The case manager must then do a quality assessment of the process and identify ways to improve the process. Other slight variations of the process the researcher just outlined may exist, but based on input and observations of various case managers at WRAMC this is the conceptual model recommended (Appendix A). Another method of tracking specific details to each phase or step in the treatment plan is to follow a detailed clinical care pathway.

Clinical care pathways allow managers and providers to track and establish roles and responsibilities for each area and clinic throughout each phase of care. Clinical care pathways

have proven to reduce clinical complications, reduce length of stay and increase patient satisfaction (Weiland, 1997). Without identifying roles and responsibilities during each phase of care, the process will continue to remain unclear. The researcher has included an illustration of a clinical care pathway worksheet as a template for designing the specific tasks to be completed during each step of the treatment process for the various clinical diagnoses (Appendix B).

In addition to the personnel turnover, the number of staff involved in the process of care creates a requirement to have written procedures in place. Providers, patients, and case managers must understand the intricacies of the management process in order to properly develop and execute a treatment plan. Each clinical section has a different mission and therefore close coordination and familiarity with the interconnectivity of the clinics is critical to provide patients with seamless care management. The interdisciplinary committee is currently the enabler that allows the management process to flow in an organized manner. The team is comprised of the primary providers, a dietician, a discharge planning nurse, a physical or occupational therapist, and case manager or social worker. The team convenes an interdisciplinary board weekly to review new or complex cases to ensure the correct course of treatment is being followed. The challenge for the committee is organizational consistency. Although the committee reviews the cases and recommends action plans, they have no control over any of the services outside of their positions that may have involvement in the action plan. The researcher also noted that the providers routinely do not attend these meetings. The case managers are then left to coordinate an action plan that may span several services and encounter multiple care coordinators or case managers along the way. In some cases command influence was needed to coordinate the clinical departments.

During August of 2005 the Department of Social Work conducted a study based on the guidance of the Hospital Commander. The Department of Social Work was requested to provide recommendations on how to improve the case management of the Medical Hold and Medical Holdover soldiers. The decision paper presented to the commander from the Department of Social Work provided information and observations that were consistent with the findings made in this study. Subsequently, the commander authorized the Department of Social Work to assume supervisor responsibility over the Medical Hold and Medical Holdover case managers. Based on the observations, information and findings from this exploratory study of the case management process at Walter Reed, further research is warranted.

Further Research

While this study was qualitative in nature and explored the actual process of case management, further studies should be conducted to collect data in order to further analyze staffing models and possible training programs for case managers. The leadership, specifically resource managers, might find a study based on credentialing useful when developing duty descriptions and scope of practice responsibilities for case managers.

Finally, a quantitative evaluation of the productivity of case managers would complete a thorough analysis of the case management process at WRAMC. Establishing dependent and independent variables that have the potential to impact productivity would be the first step. Possible dependent variables could be the average length of stay and/or the number of appointments scheduled and kept. Independent variables might include education level, certification from the Commission for Case Managers, years of case management experience, or number of current cases being managed. Even though further research could prove useful, the conclusions and recommendation provided by this study must be addressed first.

Conclusions and Recommendations

Conclusion

The purpose of this study was to determine if Walter Reed's case management program lacked proper protocols, staffing, and organizational structure which may impact the effectiveness of the process. According to the researcher's findings, a lack of written protocol and organizational barriers do impact the continuity of care management. Ultimately, the overall process works well, but still has the potential to benefit significantly with some minor changes. The case managers are working hard to take care of the soldiers, but following a prescribed protocol across services and having specific clinical pathways to guide in treatment could reduce the duplicate efforts that are sometimes caused by lack of coordination or miscommunication.

Emphasis on caring for our wounded soldiers continues to be the focus of the Army Medical Department and all subordinate medical facilities. This places an increased interest on how soldiers are being cared for from the media, family members, and senior officials within the Department of Defense. Any break or barrier in the continuity of a soldier's care is heavily scrutinized. Social workers, nurses, and discharge planners each play an important role in the recovery and rehabilitation of our injured war heroes. Each group has a scope of practice that is crucial to the successful care of patients. The most efficient way to exercise each scope of practice is through consistent communication and well defined job descriptions.

Recommendations

The researcher recommends that the findings of the study be utilized by hospital leadership to improve the current case management process. Some of these recommendations have already been realized and procedures are being implemented to improve the process. The Deputy Commander for Clinical Services is taking a more supervisory role of the

interdisciplinary actions throughout the facility. The Chief of Neurology is overseeing the Medical Evaluation Board and reviewing cases that exceed the regulatory time line. In addition, efforts are also under way to align supervision for the case managers in MEDHOLD. This study should further be used as a catalyst to revise and develop formal written procedures and job descriptions for each scope of management, and also implement clinical pathway worksheets to improve continuity and understanding of how case management functions.

References

- Bingham, M. O., Birgenheier, P. S., & Meyer, J. G. (2005, July-September). Rebuilding a future: a soldier readiness case management program. *U.S. Army Medical Department Journal*, PB#8-05-7/8/9.
- Cohen, E. L., & Cesta, T. G. (1993). *Nurse case management: from concept to evaluation*. St. Louis, MO: Mosby-Year Book Inc.
- Commission for Case Managers Certification (2005). *CCM certification guide, certified case manager*. Rolling Meadows, Ill. [Electronic Version]. Retrieved January 10, 2006 from http://www.ccmcertification.org/pages/22frame_set.html
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Crumbly, D. R., Ice, R. C., & Cassidy, R. (1999, July/Aug). Nurse managed wound clinic: a case study in success. *Nursing Case Management*, 4(4), 168-177.
- Hyman, D. A., Mathias, S. M., Schultheiss, P., Bye, M., Kohrs, C. T., Levine, G., et al. (2004). *Improving health care: A dose of competition*. Washington, D.C: Federal Trade Commission and Department of Justice.
- Fleming-Michael, K. (2004). Tourniquets, dressings, powders changing battlefield trauma care [Electronic Version]. Retrieved October 20, 2005 from http://www.dcmilitary.com/army/standard/9_18/features/30900-1.html
- Gawande, A. (2004, December). Casualties of war: military care for the wounded from Iraq and Afghanistan. *The New England Journal of Medicine*, 351, 2471-2475.
- Gorin, S. H. (2003). The unraveling of managed care: recent trends and implications. *Health and Social Work*, 28(3), 241-246.

- Grosshaus, W., & Chenlimsky, E. (1990). *Case study evaluations*. (GAO/PEMD-91-10.1.9). Washington, DC: General Accounting Office.
- Hawkins, J. W., Veeder, N. W., & Pearce, C.W. (1998). *Nurse social worker collaboration in managed care: a model of community case management*. New York, NY: Springer Publishing Company
- Health Administration Responsibility Project (n.d.) Title 42: Public health, Chapter 6A, Subchapter XI: Health maintenance organizations. Retrieved June 13, 2005 from <http://www.harp.org/hmoa1973.htm>
- Hoepfl, M.C. (1997). Choosing qualitative research: A primer for technology education researchers. *Journal of Technology Education*, 9(1).
- Joint Commission on Accreditation of Healthcare Organizations (2005). *Comprehensive Accreditation Manual for Hospitals: The Official Handbook. Management of Human Resources*. Oakbrook Terrace, IL: Joint Commission Resources, Inc.
- Keigher, S. M. (2000). Communication in the evolving world of case management. *Health and Social Work*, 25(4), 227-231.
- Kongstvedt, P. R. (2001): *The Managed Care Health Care Handbook*, pp. 195, 1367. Gaithersburg, MD: Aspen Publishers, Inc.
- Litwin, M.S. (1995). *How to Measure Survey Reliability and Validity*. Thousand Oaks, CA: Sage Publications, Inc.
- Mullahy, C. M. (1998): *The Case Manager's Handbook* (2nd ed.). Gaithersburg, MD: Aspen Publishers, Inc
- Shi, L., & Singh, D. A. (2001). *Delivering health care in America: A systems approach* (2nd ed.). Gaithersburg, MD: Aspen.

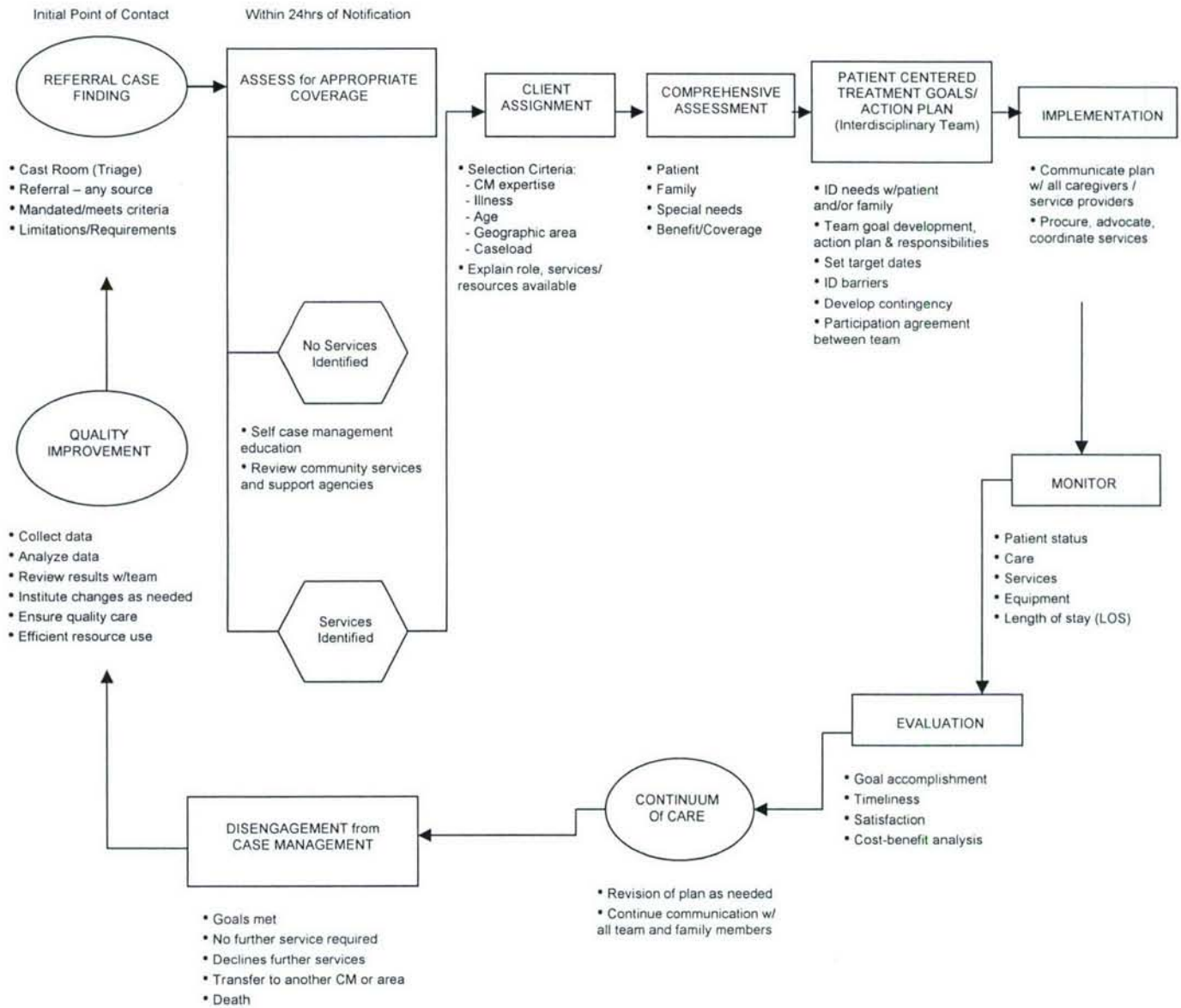
- Siefker, J. M., Garrett, M. B., Van Genderen, A., & Weis, M.J. (1998). *Fundamentals of case management: guidelines for practicing case managers*. Seattle, WA: Mosby-Year Book.
- Shinseki, E. (personal communication, June 3, 2003). Implementation of warrior ethos training. <http://www-tradoc.army.mil/PAO/TNSarchives/January04/010904.htm>
- Smith, D.S. (1995, October). Standards of practice for case management: the importance of practice standards. *The Journal of Care Management*, 1(3), 6-16.
- Sullivan, K. (2002-2003, Winter). Understanding the health care reform debate: a primer for the perplexed [Electronic Version]. *Social Policy*, 33(1), 53-58
- Walter Reed Army Medical Center Department of Social Work (2005, July15). *Department of Social Work inbrief*. PowerPoint presentation presented to the Walter Reed Army Medical Center Commander, Washington, D.C.
- Weiland, D. S. (1997, December). Why use clinical pathways rather than practice guidelines. *The American Journal of Surgery*, 174, 592-595
- Weintraub, W. S., & Shine, K. (2004). Is a paradigm shift in U.S. healthcare reimbursement inevitable? *Circulation*, 109, 1448-1455.
- White, A.B. (2004, May/June). Case management and the national quality agenda: partnering to improve the quality of care. *Lippincott's Case Management*, 9(3), 132-140.
- Winkenwerder, W. (2005). Testimony presented before the Subcommittee on Military Quality of Life, Veterans Affairs and Related Agencies Appropriations Committee. U.S. House of Representatives.
- Woolbright, D. (1997, October). Pediatric case management in the emergency department. *The Journal of Nursing Management*, 28(10), 39-40, 42.

Wright, K.M., Huffman, A.H., Adler, A.B., Castro, C.A. (2002). Psychological screening program overview. *Military Medicine*, 167, 853-861.

Yin, R. K. (2003). *Case Study Research: Design and Methods* (3rd ed.). Thousand Oaks, CA: Sage.

Appendix A

Proposed Conceptual Model of Case Management at Walter Reed



Appendix B

Example of Clinical Pathway Worksheet

Primary Care Provider: _____		Initial Encounter Date: ___/___/___		Age: _____		
Patient Name: _____						
Location	Treatment Plan	C/NC	Clinic Visit - ___ Week Follow- Up	C/NC	Clinic Visit - ___ Week Follow- Up	C/NC
Assessment	Date of Last Visit: ___/___/___ Provider Name: _____ (Treatment Plan Checklist)		Date of Last Visit: ___/___/___ Provider Name: _____		Date of Last Visit: ___/___/___ Provider Name: _____	
Consults						
Monitoring	Temperature Pulse Blood Pressure Height Weight		Temperature Pulse Blood Pressure Height Weight		Temperature Pulse Blood Pressure Height Weight	
Treatments/ Therapy						
Medications						
Nutrition						
Invasive Procedures						
Activities						

Note: C= Complete NC= Not Complete

Statement Certifying Completion of Residency

23 June 2006

This is to certify that CPT Kevin S. Smith successfully completed the administrative residency in health administration on 23 June 2006 at Walter Reed Army Medical Center, Washington, DC and that he submitted supporting material necessary to meet residency requirements published by the US Army-Baylor University Graduate Program in Health Care Administration.

GRADE:

PASS

FAIL



Calvin E. Williams, Colonel
Deputy Commander for Administration
Walter Reed Army Medical Center



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WALTER REED HEALTH CARE SYSTEM
WASHINGTON, D.C. 20301-5001

MCHL-DCA

23 June 2006

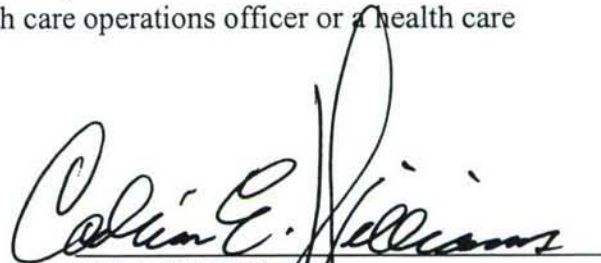
MEMORANDIUM FOR Dr. David Mangelsdorff, U.S. Army-Baylor University
Graduate Program in Health Care Administration, US AMEDD
Center & School, Bldg 2841, MCCS-HFB, 3151 Scott Road, Fort Sam
Houston, TX 78234-6135

1. CPT Smith has developed into an excellent health care administrator during the administrative residency. As a health care operations officer, he was very familiar with field hospitals, aid stations, and forward surgical units, but he had never been in a fixed community hospital or medical center for an assignment. As such, he was a little apprehensive about working in the largest medical center in DoD and its environment, duties, and focus. His initial apprehensions were quickly dispelled during his early rotations. He astutely ascertained that the mission of taking care of soldiers was the same, but the scale and complexity of the mission and the environment were very different. Now that he is at the end of his residency I'm sure that he is just as comfortable in this TDA medical center as he is in a battalion aid station.
2. He was always very sure of the skills he learned in the didactic phase. He put these skills to use tackling the improvement of case management for our war casualties, though initially his task was not nearly this focused. One of the skills that he had and polished while he was here is his ability to make people feel very comfortable as he is interacting with them. He was able to discern from his interviews and other research that the critical area of casualty care would benefit the most from an indepth review of case management. Due to the visibility of this mission, the extensive injuries suffered by some of the soldiers, and the multiple governmental departments involved, case management was very stressful in this area. CPT Smith was able to put people at ease and have them open up with valuable information and insight, both supervisors and subordinates. This formed a great foundation for his GMP.
3. He was more than "just a student". He was a contributing team member furthering the mission of the medical center, from his participation with our successful 2005 JCAHO or representing WRAMC and the U.S. Army while leading visiting VIP's through the medical center. He was also sought after by staff because of his quantitative and analytical skills, though he was not allowed to engage all of the possibilities due to the constraints of his residency.

MCHL-DCA

SUBJECT: Endorsement Letter for Baylor University Graduate, CPT Kevin Smith

4. CPT Smith is a fine officer and will excel in any future endeavors that he undertakes. His assignment following this residency is in OTSG Operations. I would prefer that he and all graduates be assigned a utilization tour in a hospital following their administrative residency, this ensures these rising leaders have the opportunity to use and hone their skills. Nonetheless, CPT Smith will do well in his career as a health care operations officer or a health care administrator in a hospital.

A handwritten signature in black ink, reading "Calvin E. Williams". The signature is written in a cursive style with a large, looping flourish at the end.

Calvin E. Williams
COL, MS
Deputy Commander for
Administration



DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
6900 GEORGIA AVE NW
WASHINGTON, DC 20307

MCHL-DCA

12 July 2006

MEMORANDUM THRU Acting Deputy for Commander for Administration (ATTN: LTC Carpenter), Walter Reed Army Medical Center, Washington, DC 20703

FOR US AMEDD Center and School, Bldg 2841 MCCA-HRA (Dr. David Mangelsdorff), 3151 Scott Road, Suite 1411, Fort Sam Houston, TX 78234-6135

SUBJECT: Residency Progress Report (4th Quarter)

1. In accordance with the instructions contained in the Administrative Residency Manual, this report is submitted on behalf of CPT Kevin S. Smith, Administrative Resident, Walter Reed Army Medical Center (WRAMC), Washington DC.

a. **Residency assignment during the period:** During this final quarter, I completed my administrative and clinical rotations through WRAMC and local health service organizations. My primary point of contact at WRAMC is the Acting Deputy Commander for Administration (DCA), LTC Scott Carpenter. The previous DCA, COL Calvin Williams recently was reassigned as the Chief of Staff for the Great Plains Regional Medical Command in San Antonio, Texas.

WRAMC maintains the status of the largest Medical Center in the Department of Defense (DoD). WRAMC Serves over 83,000 beneficiaries, maintains a 261 bed tertiary facility, provides a comprehensive Graduate Medical Education Program, and operates one of the most active research programs in the DoD.

b. **Changes in the original plan (explain any deviations from the approved plan):** During this quarter each department rotation was completed according to schedule. No changes or rescheduling occurred this quarter.

c. **Professional and administrative meetings attended:** My role and responsibility in professional and administrative operations was finally realized during this quarter. This quarter presented several professional and operational learning opportunities. I was able to attend the District of Columbia Emergency Management and Preparedness Exercise in Washington D.C., which afforded me the chance to work with senior city and federal officials on procedures during and emergency or state of disaster situation. Organizations from Maryland, Virginia, and the city of DC combined to rehearse procedures in response to terrorist actions. The key lesson learned from my experience is that resource sharing and communication between local and federal agencies is critical to achieve proper response time and organization of the operational command

center. Establishing command and control across all agencies was challenging, but once established the exercise operated in a very coordinated manor.

d. **Fourth Quarter Experience:** During this quarter I gained a greater appreciation for how certain and sometimes over looked areas contribute to the success of healthcare operations.

(1) Pharmacy: The pharmacy here at WRAMC executes over \$54 million in pharmaceuticals each year. This does not include the other clinics outside of WRAMC that fall under the oversight of WRAMC. In a for profit hospital system the pharmacy is considered one of the top money makers in the organization. Here in the MHS, it is one of the most budget draining departments utilized. The WRAMC pharmacy averages filling over 35,000 prescriptions per week. The WRAMC pharmacy also has a lab for mixing and preparing chemotherapeutic and other volatile medications with very short self life. This is one way the pharmacy can reduce cost by limiting the waste of having excess short self life medications in stock.

(2) Three Dimensional Imaging Lab: The 3D Lab is a Congressional funded project to support the injured soldiers from Iraq and Afghanistan. The lab assists the Departments of Radiology and Orthopedics in bone and skeleton reconstruction. Many of the soldiers injured from Improvised Explosive Devices (IED) have serious skeletal damage. The imagery of the 3D lab allows providers and specialists to digitally reconstruct missing or damaged bone and cartilage. The digital imagery is then used to create a mold of the image and a synthetic reconstruction of the damaged area can be crafted to replace or repair the damaged bone or cartilage. The result from the technology has been amazing. Several injured soldiers have benefited from having sections of their skull and/or jaw reconstructed.

e. **Status of GMP:** I revised and resubmitted my GMP for review the second week of May. Dr. Mangelsdorff returned a response on 27 May 2006 that stated my GMP was accepted. I did refine one spelling error that he pointed out. **I have enclosed two disk copies, two paper copies, the preceptor's residency completion memorandum, the preceptor's final report and the residents final report.**

f. **Additional Project(s):** I continued to serve as a member of the Base Realignment and Closure (BRAC) subcommittee for administration and assisted in the development of proposed metrics to better capture workload at WRAMC. Over the past few months of serving on the committee I have learned a great deal about the intricacies and dynamics of aligning multiple organizations. The integration steering committee meetings have given me the over all big picture of how the multiple subcommittees link together. The BRAC project has allowed me to revisit and practice the concepts and skills taught in our Strategic Management and Finance III courses. The BRAC integration is without a doubt the largest strategic project I have had the opportunity to be part of. My second project, which actually began in the third quarter, is outlining measures to help improve workload accountability at WRAMC.

As WRAMC moves forward with patient care and BRAC integration, it is imperative that the business processes of WRAMC become focused on productivity in order to streamline operations and optimize resources. Proposals being considered for implementation are to defined performance measures for administrators that focus them on specific workload accountability metrics, a restructured rating scheme of the administrative staff to provide better

over sight of administrative functions, and a bi-monthly dashboard/scorecard that tracks specific metrics requested by the commander.

2. Comments/recommendations: (Any additional information the resident deems appropriate). The final quarter of my residency has served as final confirmation of my ability and knowledge as a healthcare administrator. I feel much more confident in my abilities to function as an administrator in a medical treatment facility. Having not served in a hospital environment prior to being assigned to Walter Reed, I was hesitant about my ability to function as a hospital administrator. After this graduate educational experience I can honestly say that the hesitation is gone. A solid didactic school year and a top notch preceptor made this program very worth while.

COL Williams is a great mentor. He was actively engaged in my professional growth and development, by encouraging my participation in many of his deputy level functions and projects. He always made time to discuss and assist me with any issue or question that arose during my journey. I truly appreciate that level of dedication and professionalism.

The final comment I would like to make is in reference to the follow-on utilization assignment after Baylor. I feel that those personnel who attend the program should have to serve the next assignment in an administrative hospital position. This would allow the graduate to fully engage and exercise their skills as a healthcare administrator. Some graduates are assigned to units or organizations that are not hospital administration related. I am one of those graduates. I would like to have an assignment in a MEDDAC as a follow on, but instead I am going back to an operational assignment. Regardless of where I go, I will carry this great experience with me always.

3. Point of contact for this memorandum is the undersigned at (202) 782-6698 (DSN 662).



KEVIN S. SMITH

CPT(P), MS

Baylor Administrative Resident