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As DoD shifts its basis for resourcing MTFs from output (workload) to efficiency (DRGs) and eventually to a prospective payment system (capitation), hospital commanders will have to be more aggressive in their efforts to improve resource management. Utilization Management (UM) will become an important tool for all military hospitals. UM has been widely adopted in the last five to ten years by most payers and providers of health care in the civilian sector as an effective way to help contain costs. However, DoD UM program guidance in the direct care system has been very limited. The purpose of this study was to develop a UM program model for MTFs. The model can be used by hospital commanders and UM program managers to evaluate and make recommendations to their UM programs. A complete review of the literature as well as interviews with subject matter experts was performed. A distillation and synthesis of pertinent literature and interviews was the basis for developing a UM program model for MTFs. The UM program model was validated by an expert panel. The program model consists of six parts which serve as a conceptual framework for a MTF UM program. Although providing detailed policy and procedure descriptions was not the intent of this project, a recommended reading list is provided at the end of each part for the reader wishing more detailed information.

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Submitted to the Faculty of

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In Partial Fulfillment of the

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of

Master of Healthcare Administration

by

Lieutenant Gilda M. Collazo, MSC, U. S. Navy

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Abstract

As the Department of Defense (DoD) shifts its basis for resourcing military treatment facilities (MTFs) from output (workload) to efficiency (diagnosis related groups (DRGs)/ambulatory visit groups (AVGs)/resources) and eventually to a prospective payment system (capitation), hospital commanders will have to be more aggressive in their efforts to improve resource management. Utilization Management (UM) will become an important tool for all military hospitals. UM has been widely adopted relatively recently (5-10 years) by most payers and providers of health care in the civilian sector as an effective way to help contain costs. However, DoD UM program guidance in the direct care system has been very limited. A realistic program model for MTFs needs to be developed.

The purpose of this study was to develop a UM program model for MTFs. The model can be used by hospital commanders and UM program managers to evaluate and make recommendations to their UM programs.

A complete review of the literature as well as interviews with subject matter experts both internal and external to DoD was performed. A distillation and synthesis of pertinent literature and interviews was

the basis for developing a UM program model for MTFs. The UM program model developed was validated by a panel consisting of UM experts from the DoD and civilian community.

The program model consists of six parts which serve as a conceptual framework for a MTF UM program. Although providing detailed policy and procedure descriptions was not the intent of this project, a recommended reading list is provided at the end of each part for the reader wishing more detailed information. The parts, listed in order of importance are: (1) MTF UM Climate and Culture; (2) UM Mission, Goals, and Objectives; (3) UM Participants (organization, training, and support); (4) Inpatient Management; (5) Resource Management; and (6) Outpatient Management. The model ends with a discussion on monitoring and evaluation.

I. Introduction

Conditions Which Prompted This Study

It is well known that health care costs are rising faster than any other component of the nation's Gross Domestic Product (GDP). Utilization management (UM) has been adopted relatively recently (5-10 years) by most payers and providers of health care as an effective way to help contain costs (Braendel, 1990).

The Department of Defense (DoD) health care delivery system faces many of the same challenges as its civilian counterparts. The DoD mission is increasingly threatened as a greater percentage of the decreasing DoD budget is needed to cover the rising health care costs. Demonstration projects such as the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) Reform Initiative (CRI) and Catchment Area Management were initiated to explore alternative ways to structure and manage the CHAMPUS program within defined geographical areas. These projects have shown potential for containing rising CHAMPUS costs (Badgett, 1990). Although utilization management is often an important component of these programs, the emphasis appears to be on services performed outside of the Military Treatment Facility (MTF) or by a nonfederal

provider. For example, the UM program at Naval Hospital San Diego (NHSD) appears rather limited when compared with that of AETNA (the CRI subcontractor for Southern California) both in type of activities performed and depth (B. Carson, personal communication, December 12, 1991 and L. Scott, personal communication, January 10, 1992). As noted by Braendel (1990), the military has a weak performance record in UM, as compared with quality assurance (QA), due largely to a budgeting system that traditionally has rewarded output, not efficiency.

As DoD health care dollars become more constrained in the future and resource allocation moves from being based on output (outpatient visits, admissions, occupied bed days, etc.) to diagnostic related groups (DRGs)/ambulatory visit groups (AVGs) and eventually to a prospective payment system (capitation), hospital commanders will have to be more aggressive in their efforts to increase efficiency and effectiveness. Utilization management will become a much more important tool for all military hospitals. Currently, guidance from higher authority (DoD and the Bureau of Medicine and Surgery (BUMED)) on UM in the direct health care system is minimal (BUMED Instruction

6010.13, 1991; DoD Directive 6025.13, 1988). A thorough review of the literature and analyses of UM programs elsewhere in DoD and the civilian sector are needed to develop a realistic program model for the military.

The term utilization management has no single, well-accepted definition. As with other labels such as "managed care" and "high quality care," various users apply different meanings for the same terms (Gray & Field, 1989). Since this project focuses on UM programs established by the hospital for care provided in the hospital, the following definition will be used:

> The term 'utilization review [management]' embraces a variety of techniques devised to assure the delivery of necessary and appropriate health care services without jeopardizing their quality. (Martin, Milstein, & Loveland, 1988, p. 10)

The term "utilization management" (UM) instead of "utilization review" (UR) is selected in this project because UM denotes a more comprehensive system. As Braendel (1990) describes, UR implies predominantly a retrospective review. When a utilization plan involves simultaneously retrospective, concurrent, and prospective attention to the allocation of resources,

"management" is the more fitting term. In this paper, references are made to utilization review (UR) since many authors and accrediting bodies, such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), still use the term. UR will be used when referencing these sources to avoid confusion.

Statement of the Management Problem

As DoD shifts its basis for resourcing military treatment facilities from output (workload) to efficiency (DRGs/AVGs/resources), prudent commanders will seek additional ways to improve hospital efficiency through aggressive utilization management programs. A realistic program model for military treatment facilities needs to be developed.

Purpose of the Study

The purpose of this study was to develop a realistic utilization management program model for military treatment facilities. The model can be used to evaluate and make recommendations for utilization management programs in MTFs.

Methods and Procedures

A complete review of the literature as well as interviews with subject matter experts both internal and external to DoD was performed. A distillation and

synthesis of pertinent literature and interviews were the basis for developing a utilization management program model for MTFs. The UM program model developed was validated by a panel consisting of UM experts from both the DoD and civilian community.

II. Literature Review

The need to control rapidly escalating health care costs has become one of the top issues facing and influencing our health care system today. Specifically, the use of hospital services has received the most attention. Various activities and programs have been implemented by third party payers in response to employers' demands to contain costs. Hospital utilization review has become the most common activity implemented by third party payers (Wickizer, 1990).

Definitions and Descriptions

As previously stated, the term utilization management/review lacks a universally-accepted definition. The literature provides very few formal definitions; in most cases, the authors assume a common understanding with a well-defined journal audience. Literature that provides formal definitions is oriented toward activities performed by organizations external to the hospital, i.e., utilization review firms hired by payers (Utilization Review Accreditation Committee, 1991; Gray & Field, 1989). Definitions derived from activities performed by hospitals are generally very limited and inadequate for use in this project. For example, Rowland & Rowland (1984) state that

"utilization review is designed to aid in making the medical treatment process cost-effective, mainly through analyzing institutional length-of-stay and hospital bed utilization" (p. 655). The lack of agreement on meaning and the focus of this project prompted selection of the "utilization management" definition stated in the previous chapter.

Statements of program purpose/intent for utilization management/review were more common in the literature than formal definitions but shared some of the problems of orientation discussed above. The following two program purpose statements best describe UM in light of the intent of this project:

> The utilization [management/]review program endeavors to assure appropriate allocation of the hospital's resources by striving to provide quality patient care in the most cost-effective manner . . . The program addresses overutilization, underutilization, and inefficient scheduling of resources. (Accreditation Manual for Hospitals, 1991, p. 281)

and:

> Utilization review seeks to constrain costs by reducing unnecessary or inappropriate use of

hospital care. (Wickizer, 1990)

Lack of consensus also exists with terms used within the above definitions and descriptions, i.e. the terms "inappropriate" and "unnecessary." For the purposes of this proposal the more common definitions for these terms will be used: (1) inappropriate - could be delivered in a less expensive setting and (2) unnecessary - provides no significant clinical benefit (Wickizer, 1990).

Utilization management/review activities can be classified in many different ways. The two most common are (1) according to the timing of the review relative to when services are delivered or (2) according to the services covered. Preadmission review, continued stay review, and retrospective review constitute the former method. Second opinion surgery, case management, and discharge planning are examples of common service-specific approaches (Ermann, 1988; Vibbert, 1989). Bill auditing, telephone "hot lines" for employees, and equipment purchase and use review, are newer activities that fall outside the above classification system (Vibbert, 1989).

It is important to note that UM cannot be studied in isolation from other hospital activities. UM is

closely intertwined with quality assurance, risk management, and privileging of providers as well as hospital-wide cost containment programs. Donabedian (1990) states that UM activities assess clinical efficiency whereas quality assurance activities assess clinical effectiveness. However, UM activities may contribute to quality assurance activities when unnecessary care is also found to be harmful to the patient. In the same way, quality assurance activities may contribute to UM activities when unnecessary and harmless care is discovered.

As mentioned previously, utilization management is a very important tool in a hospital cost containment program. However, the line between pure UM activities and those belonging to other cost containment programs is becoming increasingly blurred. For example, in the past, utilization review in hospitals concentrated on length of stay and bed utilization reviews (Rowland & Rowland, 1984). Today utilization management programs may incorporate: discharge planning; case management; review and management of workers' compensation cases; physician profiling; equipment purchases, maintenance and use reviews; clinical practice standards; and review of outpatient and ancillary services. It is

important that any study of UM consider *all* hospital activities that relate to UM activities.

History and Background

During the first half of this century, UR/UM was limited to self-policing by providers (Blue Cross and Blue Shield Association, 1987). Strong external pressure in the 1960s and 1970s to control hospital costs increased the importance of UR. Most notably, the enactment of Medicare and Medicaid in 1965 and 1967, respectively, required that hospitals wishing to participate have a UR program. Additionally, the National Center for Health Services Research (NCHSR) initiated the Experimental Medical Care Review Organization (EMCRO) program in 1971 to study the effect of systematic and ongoing review of medical care. Professional Standards Review Organizations (PSROs), modeled after the EMCROs, were established in 1972 by the federal government to perform UR (Ermann, 1988).

In the early 1980's employers became more keenly interested in UR as health care costs consumed a greater and greater percentage of their expenses. They began to place pressure on commercial health insurers to control health expenditures by beginning to review

claims (Ermann, 1988). Consequently, employers began to rely on UR services provided by a myriad of organizations in order to decrease costs of employee health care.

Implemented in 1983, Medicare's prospective payment system (PPS) elevated the importance of UR especially for hospitals (Ermann, 1988). However, organizations external to the hospital--Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs), Peer Review Organizations (PROs), insurance plans, etc.--developed the most aggressive programs and state-of-the-art techniques for review of hospital services creating what is called today a utilization management industry (Gray & Field, 1988). Presently, over 1000 UR firms exist with the average hospital responding to 45 to 50 of them (Robinson, 1988). For example, in 1984 the Mayo clinic dealt with one UM program--Medicare beneficiary pre-certification. In 1988 it responded to over 1000 UR plans (Gray & Field, 1988).

Gray & Field (1988) provide a thorough and in-depth review of the origins of UM. They conclude their discussion with the following:

Much of this century has been devoted, first, to

> improving the effectiveness of medical treatments, second, to increasing individual protection against the financial burdens of medical services, and, third, to trying to control the economic costs of expanding access to more sophisticated medical care . . . . Most current approaches to controlling costs and improving the appropriateness of care have been tried and revised, with varying degrees of enthusiasm and sophistication, over several decades. Utilization management builds on the gradual accumulation of experience and data that suggest that externally applied assessments of the appropriateness of proposed medical services can constructively influence how care is provided and, as one consequence, help constrain health care costs. (p. 51-52)

Effectiveness of UM

UM is relatively new when compared with other health care delivery related activities (such as quality assurance, risk management and privileging). Numerous studies have been conducted in the last 20 years to evaluate the effectiveness of various UM activities (Feldstein, P. J., Wickizer, T. M., and Wheeler, J. R. C., 1988; Gray & Field, 1988;

Strumwasser, Paranipe, Ronis, Share, & Sell, 1989; Wickizer, Feldstein, & Wheeler, 1988; ?Wickizer, Wheeler, and Feldstein, 1989; and Wickizer, 1990). Feldstein et. al. examined the effects of a UM program instituted by a large private insurance carrier and found that the program significantly affected hospital use and total expenditures negatively. Wickzer, et. al. performed a similar study with similar results. Wickizer's review of the literature on this topic is an excellent reference source for readers wanting more information. He concludes his review by stating that "the literature on UR is suggestive, but not conclusive" (p. 354) and warns readers that specific study findings should not be generalized. Gray and Field echo this by pointing out that UM as it operates today is highly variable and making generalizations is difficult. They felt that systematic evidence about the impact of UM methods on cost and quality were nonexistent. Although the debate continues as to the effectiveness of UM, most experts agree that an aggressive, well-run program makes a significant difference in cost containment (Vibbert, 1989).

UM Profession

As discussed in chapter one, hospital UM has become

the most common activity implemented by third party payers of health care to contain costs (Wickizer, 1990). Consequently, the number of jobs in the UM field has grown (Gray & Field, 1988).

Donabedian (1990) believes that a new specialty--which he has named "clinical performance monitoring or management"--is needed. In his paper, he provides a flow chart of the health care process illustrating how QA, UR, and RM are interrelated. Additionally, he outlines the types of functions to be performed and the training and experience needed for UM professionals. Donabedian echos Zusman's (1990) remarks that QA, UR, and RM professionals' need more defined and standardized experience and training.

Zusman (1990) believes that even though UM is becoming a separate health care profession with its own "body of knowledge and methods of operation," (p. 143) a set of guidelines and traditions that normally guide professionals is missing. Since most UM professionals have roots in one of three well established and developed professions--medicine, nursing, and medical records--, they normally rely on the customs and codes of those professions to guide them in their daily decisions. Health care professions primary objectives

differ from UM in that the UM professionals' primary objective is to protect "the interests of the health care system and society as a whole" (p. 143) rather than the individual patients.

Zusman points out that conflicts between interests of the patient, the physician, the UM organization (department for military setting) and the insurer (the MTF for the military setting) demonstrates the need for professional guidance.

Professional societies such as the American College of Utilization Review Physicians (ACURP) will hopefully begin to develop unique and sturdy foundations. Additionally, well-defined and respected educational programs need to be established (Donabedian, 1990).

Recommended readings on this topic are listed in Appendix A.

Additional Research Needs

Although many studies have been conducted, more research is needed to examine effectiveness of specific techniques and tools used in UM, effects of UM activities on other hospital activities, and various approaches to UM. Examples include studies to evaluate: (1) the effect of UM on quality of care; (2) specific decision-making processes or criteria used;

(3) the influence of incentives introduced by UM; (4) whether to focus incentives on providers or patients; and (5) whether to use focused approaches rather than across the board approaches (Wickizer, 1990).

Clinical practice guidelines. The development and use of clinical practice guidelines and standards must be further investigated. Leape (1990) defines a practice guideline as "a standardized specification for care developed by a formal process that incorporates the best scientific evidence with expert opinion" (p. 43).

The first practice standards were developed over 50 years ago by the American Academy of Pediatrics, and in the past decade, their use has become more prevalent (Kelly & Swartwout, 1990). Practice standards are now a part of many quality assurance and utilization management programs. There are over 1,300 clinical practice guidelines and standards in existence with an additional 200 in development. Over three dozen different physician organizations have developed practice standards. The federal government has also become involved in the development of practice guidelines. The Agency for Health Care Policy and Research (AHCPR) planned to begin releasing

approximately 15 different sets of clinical guidelines at 60-90 day intervals beginning in the Fall of 1991 (Interest in practice parameters, 1991). However, they are behind schedule and as of Spring 1992, only three guidelines have been released--benign prostatic hyperplasia, adult urinary incontinence, and postoperative pain (Hudson, 1992; Brinkerhoff, personal communication, 17 June 1992). Practice standards hold promise for both cost control and improving quality (Vibbert, 1989). However, Gray and Field (1989) have a number of concerns regarding practice standards that need to be resolved before the greatest benefit from these standards can be achieved. As an example, Gray and Field believe that an oversight system must be put into place to review the method of standard development. Furthermore, Hudson (1992) states that the guidelines will not be useful unless they are linked to outcomes. AHCPR's guidelines are being issued before the outcomes research is complete.

Recommended readings on this topic are listed in Appendix A.

Outpatient utilization management. The percentage of healthcare costs associated with inpatient care declined from 70 percent to 50 percent from 1960 to the

present which may be partially attributed to aggressive UM efforts. Unfortunately, total healthcare costs have risen substantially. In the past six years, outpatient surgery has increased over 60 percent (Bacon, 1991) because providers have shifted care to their offices where constraints and scrutiny are more difficult to impose (Wickizer, Wheeler, and Feldstein, 1991). Wickizer et. al. refer to this shift in settings as a substitution effect. Consequently, additional research opportunities exist for developing and studying UM tools, techniques, and activities for outpatient services.

Testing the tools. Strumwasser et. al. (1990) conducted a study to assess the reliability and validity of three utilization review instruments--Appropriateness Evaluation Protocol (AEP), the Standardized Medreview Instrument (SMI) and the Intensity-Severity-Discharge criteria set (ISD). The study results found that ISD and AEP were moderately valid and that SMI had low validity and should not be used. Their study appears to be the only source in the literature specifically assessing products available in the UM market. More specific studies such as this one are needed to assist UM program managers in selecting

the best products\tools for their programs.

Hospital UM Program Guidance

Much research has been devoted to establishing, reviewing, and improving UM programs (Baschon, 1990; Bluestein, 1988; Boland, 1989; Connor, 1988; Demarco & Fox, 1989a; Garg, Kleinberg, Schmitt, & Baransky, 1985; Kenkel, 1988; Lawless, 1989; Martin, Milstein, & Loveland, 1988; Strumwasser, Paranipe, Ronis, Nastas, Livingston, & Share, 1989; and White, 1988). However, most of the literature focuses on UM activities performed by organizations external to hospital[1]. Even so, what has been determined to be effective can be adapted and applied to internal hospital UM programs. For example, Martin, Milstein, and Loveland (1988) provide a checklist for employers to use to evaluate firms that provide utilization review services. The checklist assists employers in determining the ability of a firm to ensure optimal quality and value for dollars spent on services. Much of the evaluation

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[1] A great deal of concern has been expressed within the last five years over the lack of regulation/standardization of these external organizations (Robinson, 1988; Gray & Field, 1989). This concern was the reason for the establishment of the Institute of Medicine's Committee on Utilization Management by Third Parties. The result of the committee's investigations was a 300 page published report *Controlling Costs and Changing Patient Care? The Role of Utilization Management* (Gray & Field, 1989)

checklist may be used or adapted in reviewing hospital UM programs. Vibbert (1990), in discussing the activities of UM organizations, states that successful UM programs are based on the following five fundamental factors:

- the quality of the reviewers,
- the thoroughness of the review approach,
- the techniques used for case sampling,
- how well the program is marketed to patients [and providers], and
- the existence and type of sanctions. (p. 40)

UM guidance or standards provided by national accrediting organizations such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the National Committee for Quality Assurance (NCQA) are broad and limited especially when compared with standards developed for quality assurance.

The Utilization Review Accreditation Commission (URAC) was established by the American Managed Care and Review Association (AMCRA) in 1991 in response to providers' concerns and frustration with the lack of consistency and uniformity of policies and procedures used by different UR firms. More importantly, it was established to discourage states from imposing further

regulations on UR organizations and UR activities (Vibbert, 1989). URAC has developed and promulgated minimum industry standards to improve the interaction between the UR industry and payers, providers, and purchasers of care. These standards are rather broad and are oriented toward UM activities performed by organizations external to the hospital.

In summary national accrediting bodies' standards are broad and have limited value in assisting the hospital UM program manager in designing the nuts and bolts of a program.

DoD MTF UM Program Guidance

As with national standards, DoD guidance at all levels--Office of Assistant Secretary of Defense for Health Affairs (OASD(HA)), individual service medical headquarters, and MTFs--is broad and of limited practical value, especially when compared to guidance or mandates provided for quality assurance (DoD Directive 6025.13, 1988; BUMED Instruction 6010.13, 1991; U. S. Department of the Army Regulation 40-68, 1989; U. S. Department of the Army Regulation 40-66, 1987; U. S. Department of the Air Force Regulation 168-13, Attachment 7, 1989; U. S. Department of the Air Force Concept of Operations for a Utilization

Management Program for Air Force Medical Treatment Facilities, Draft USAF Managed Care Plan, 1992; NHSD Instruction 6320.85D, 1992; and Walter Reed Army Medical Center (WRAMC) Regulation 40-92, 1990).

The U. S. Department of the Navy UM guidance was by far the most limited with only half of one page of a 39 page instruction being devoted to UM; the rest of the instruction addressed QA and RM (BUMED Instruction 6010.13, 1991). The U. S. Department of the Army UM guidance, although somewhat better than the Navy's, was convoluted with extraneous requirements such as implementing time management techniques and assessing patient waiting times and sick call hours (U. S. Department of the Army Regulation 40-68, 1989; U.S. Army Regulation 40-66, 1987.) In both Services' guidance most of the key UM "buzz" words were mentioned; however, adequate explanations of these terms was not provided. The U. S. Department of the Air Force provided the best guidance of the three services. All of the key UM components were mentioned and explained, but once again the specific guidance required to implement an effective program was not provided. UM program managers need to understand these concepts as well as when and how to use each. Given

the relative newness of UM to the military adequate written guidance or references, as well as formal training programs, needs to be developed and provided.

DoD NonMTF UM Programs

As discussed in chapter one, the most significant UM efforts in the DoD have been external to the direct care system. In 1988, DoD changed CHAMPUS reimbursement to a DRG based system. This event paralleled Medicare's implementation of a prospective payment system in 1983. The Federal Government, concerned that hospitals now had financial incentives to reduce services, elevated the importance of UR with the Federal Peer Review Act of 1982. This act created the Utilization and Quality Control Peer Review Organizations (PROs) (Ermann, 1988; B.T. Miller, personal communication, 19 June 1992). Ermann states that, "The goals of the PROs are to ensure that services provided to Medicare beneficiaries are medically necessary, that they are provided in the appropriate setting, and that they meet professionally recognized standards of quality" (p. 689).

The DoD CHAMPUS program managers had similar concerns about monitoring the care provided to DoD beneficiaries under the new DRG based system. In 1988

CHAMPUS Peer Review program contracts were awarded and DoD simply "piggy-backed" on Medicare's contract with 50 individual state PROs. In 1992, new contracts were awarded in five geographic regions instead of 50 states. All contractors now are required to use the same criteria, protocols, and review methods. This new standardization will allow for an improved central data collection, processing, and analysis (B.T. Miller and B. Cooper, personal communication, 18 & 19 June 1992).

Despite aggressive UM assessment efforts in the CHAMPUS arena, the focus of external assessments in the direct care system is strictly related to quality. The DoD Civilian External Peer Review (CEPR) program contract awarded in 1986 provides an independent system-wide assessment of health care quality in the direct care system (MTF) using contractor developed criteria. The program does not presently address utilization management. Stockmyer (personal communication, March 3, 1992) suggested that the CEPR contract could be modified to include UM assessment. When questioned, OASD(HA) personnel interviewed disagreed as to when the contract could be modified to include UM assessment. Estimates based on interviews (June, 1992) varied from two to three years to five to

ten years. However, Texas Medical Foundation management, the South Central Region CHAMPUS Peer Review program contractor, is already taking steps to be able to modify operations easily and begin review of MTFs (B. Armstrong, personal communication, July 8, 1992). Therefore, it is important that hospital commanders begin assessing their utilization management programs given the possibility of external assessment in the "near" future.

III. Model Development

The purpose of this project is to develop a UM program model for the military direct care system. DoD MTF UM program guidance and MTF UM programs are generally not as well-developed and effective as those in the civilian sector. Unfortunately, given the recent (5-10 years) adoption of UM in the health care industry, the volume of literature available for review was not as extensive as that of longer established programs such as quality assurance. Additionally, the best guidance provided in the literature was oriented toward UM performed by or for the payers of hospital services. Literature oriented toward hospital-based UM programs was not as useful as originally expected. The reason for this is that many of the major issues facing UM coordinators at civilian hospitals do not coincide with the same issues found in the military setting, e.g. working with Peer Review Organizations, working with external utilization reviewers, and handling denials and appeals.[2] Most MTF UM coordinators are

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[2] Even though MTFs have begun and will continue to collect monies from third party payers for inpatient and outpatient services provided, third party payment will never comprise as much of hospital funding as it does in the civilian sector. Therefore, recouping monies from third party payers will have less of an impact in the military environment than it does in the civilian one.

limited in the time, resources, and experience in conducting a thorough review of this literature, extract what is pertinent to their facility, and adapt it to the military setting.

Objectives for the Model

A primary objective for this project was to develop a model which reflects the uniqueness of the MTF environment. A second objective was to provide the MTF with the UM tools, activities, and programs to enhance UM activities without creating the necessity for increased resources. presented give the MTF increased returns with little to no investment of additional resources. Thirdly, the model should be written for the MTF UM coordinator with limited sophistication in UM. The model should:

1) Be easy to understand providing sufficient amount of background information.
2) Provide sufficient depth and detail
3) Be broad and flexible enough to allow individual MTF program tailoring.[3]

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[3] The intent of this model is not to provide policies and procedures for a UM program but to provide a conceptual framework. However, if the reader is searching for examples of detailed policies and procedures, Cotera's (1991) book, *Utilization Management: Policy and Procedure Manual*, as well as Baschon's book, *A Complete Guide to Utilization Management: A Practical Approach to Program Design, Implementation, and*

Introduction to the Model

A complete review of literature was performed to identify tools, activities, and programs which would be of benefit to an MTF UM program. The pertinent findings from the literature review were adapted to meet the objectives for the model.

Instructions for using the Model

Table 1 provides an outline of the model. The model is divided into six parts which are presented in order of importance with the first part being the most important. MTFs should implement activities shown at the beginning of table 1 first. The last part of the model discusses monitoring and evaluation activities and should always be implemented. A list of recommended readings for different parts of the model is provided in Appendix A.

Evaluation, are good references for obtaining that level of detail.

Table 1

Outline of Utilization Management Program Model for Military Treatment Facilities

PROGRAM PARTS[4]	Yes/No
1. Hospital has an organizational culture and climate supportive of UM.	
2. UM Mission, Goals, and Objectives have been carefully prepared and adopted.	
3. Key UM Participants are properly organized, trained and supported.	
4. An effective Inpatient UM program is in place. a) Preadmission Review b) Admission Review c) Continued Stay Review d) Discharge Planning e) Retrospective Review f) Screening Criteria g) Focused Review (DRGs/Diagnoses/Providers) h) Observation Beds i) Medical Record	
5. Hospital has a strong Resource Management program. a) Ancillary Services Utilization b) Delays in Service	
6. An effective Outpatient UM program is in place.	
MONITOR and EVALUATE UM Program	

[4] Program Parts are presented in order of importance for implementation at MTFs

What follows is a detailed explanation of each of the parts of the model to include literature review findings which were the basis for each part.[5]

Model Presentation

Part One: Hospital has an Organizational Culture and Climate Supportive of UM.

The military has a weak performance record in UM, as compared with quality assurance, due largely to a budgeting system that traditionally has rewarded output, not efficiency (Braendel, 1990). As the budgeting system changes to one based on efficiency, hospital leadership will become increasingly cost conscious. The entire healthcare team must become committed to the concept of "providing quality patient care in the most cost-effective manner (Accreditation Manual for Hospitals, 1991, p. 281)." Hospital leadership will be responsible for creating a climate where all players value resources. However, the most important subculture that must "buy-in" are the nursing

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[5] Much of the structure and content of the model was adapted from Baschon's (1992) book, *A Complete Guide to Utilization Management: A Practical Approach to Program Design, Implementation, and Evaluation*. MTF UM coordinators should consider adding this book to their library since it is the best of the very few sources in the literature providing detailed examples of policies and procedures, position descriptions, specific plans, etc.

and physician staffs. Without support from these two groups, no UM program can be successful (Baschon, 1992).

Demarco and Fox (1989b) provide the following checklist for an effective hospital-based UM program:

1) Develop a culture conducive to cost-effective care. Learn from HMOs, which rely more on corporate and peer culture than on systems to reduce utilization.
2) Create financial incentives and accountability for UM. A good incentive system rewards cost-effective provider behavior.
3) Foster the development and continual improvement of consistent, efficient treatment protocols.
4) Develop management information systems that provide prompt feedback on UM performance to physicians and administrators.
5) Facilitate changes in operations and facilities to reduce utilization. (p. 18)

Recommended readings on this topic are listed in Appendix A.

Part Two: UM Mission, Goals, and Objectives have been carefully prepared and adopted.

Each MTF must develop a hospital-wide mission, goals, and objectives for its UM program (Baschon, 1992). Facility unique issues must be considered in the development of the mission, goals, and objectives. Stockmyer (personal communication, March 3, 1992) believes that the ultimate goal of UM is that every patient is seen at the right level, by the right provider, in the right setting.

A strategic management model may be a helpful framework to assist MTFs struggling with determining direction for their programs. Environmental and internal analysis normally performed in strategic planning may be beneficial in identifying hospital specific strengths, weaknesses, opportunities, and threats with regard to UM. An important aspect in the strategic planning process is to identify stakeholders. For UM these stakeholders should include but not be limited to: hospital leadership, UM committee, UM staff, patients, administrative personnel, nursing staff, providers and external stakeholders such as DoD and BUMED. Based on findings during environmental and internal analysis, goals and objectives may need

modification.

Part Three: Key UM participants are properly organized, trained, and supported.

As mentioned above, identifying stakeholders is an important part of the strategic management process. What follows is a discussion of some of the most critical stakeholders--patients, physicians, UM Staff, UM Committee, and physician advisors. Guidance regarding coordination and integration of UM functions is also discussed.

Patients. Military beneficiaries, unlike their civilian counterparts have no economic incentive to reduce health care utilization within the direct care system. MTFs must consider steps needed to help patients become partners with the hospital staff in ensuring that only appropriate and necessary care is delivered. Undoubtedly, a strong patient education program will have to be developed.

Physicians. Physicians play the most crucial role in influencing the quality and the cost of medical care provided. The success of any UM program hinges on physician acceptance and how hospitals modify physician behavior. What follows is a discussion of highlights from the literature on this topic.

Physicians need incentives to affect cost effective care without hurting the bottom line. Donabedian (1983) believes that:

> Healthcare practitioners tend to specify optimal strategies [for care] based on what they consider to be best for the patient, without regard to monetary cost. (p. 196)

However, Demarco and Fox (1989b) state that:

> Given a commitment to providing cost effective care, the providers actually treating the patients are best able to determine how to provide quality care at the lowest possible cost. (Demarco & Fox, 1989a, p. 13)

Examples and suggestions for changing physician behavior were common in the literature. In his book, Eisenberg (1987) explores the ways in which physician behavior can be changed. Eisenberg reviews the forces that shape medical practice decisions to include a review of basic behavioral theory and the underlying motivations of the physician. He is a strong advocate for the role of education. Eisenberg states that feedback is most successful when it addresses a single clinical problem that physicians have reached agreement regarding standards of practice. Eisenberg's work

should be reviewed prior to designing a UM program.

Demarco and Fox (1989b) recommend providing physicians with daily and monthly feedback on resource use such as providing physicians with information on utilization and cost of ancillary services, supplies, etc., with meaningful comparisons of resource use between like specialties. A southern California hospital provides quarterly reports to each physicians with length of stay and other resource use information (White, 1988). Restuccia, Payne, Welge, Dayno, Kreger, Reamer, and Gertman (1986) performed a study where physicians in one service of a large teaching hospital were provided with information on inappropriate admissions and lengths of stay. Another service served as the control group. The treated group reduced the number of inappropriate patient days from 30 percent to 14.6 percent.

In teaching hospitals a special emphasis should be placed on interns and residents, who are historically the greatest overutilizers of services (J. Ungersma, personal communication, June 24, 1992). Medical schools do not adequately address UM in curricula providing limited education on cost containment and the physician's fiscal responsibility. Therefore, teaching

hospitals should incorporate cost containment into their physician training programs (Colvin, 1988).

Studies show that financial incentives are most effective in improving practitioner utilization (Egdahl & Taft, 1986; Chan, Wagers, Hernandez, and Bernstein, 1990). Therefore, an incentive program such as increasing or decreasing departmental travel and equipment dollars based on utilization assessments should be considered.

Crede & Hierholzer (1989) discuss four basic methods to change provider utilization behavior: (1) education, (2) audit and feedback, (3) ration or reduce access to care, and (4) incentives. They concluded that the effectiveness of these methods vary and that additional studies are needed to determine impact on quality and risk management.

In his article, Giordano (1985) expresses his concerns about UR as a military physician:

> . . . the concept of accountability in the practice of medicine had traditionally been more of an ethical than actuarial concern . . . . To a professional reared on the fiduciary concepts of the physician-patient relationship, the idea of having to render an account of his stewardship in facts and

> figures, dollars and cents, seemed like a personal slur on his ethics . . . . it should seem that both the clinicians and the monitors of health care delivery must develop some knowledge of the tenets of each other's creed and be prepared to accept some compromises in their value systems in the search for solutions . . . . (p. 221-222)

UM Staff. The composition of the UM department at the MTF will vary somewhat according to the program plan designed at the facility level and how other functions within the hospital are integrated. Baschon (1992) recommends that hospitals should avoid hiring staff without hospital experience or at a minimum ensure that staff are properly trained in disease processes, clinical protocols, and treatment plans. She also recommends a medical terminology course and reference manuals be provided to employees.

Baschon (1992) also recommends that UM staff have certain job skills: (1) Clinical assessment skills (2)Basic ICD9 Coding Skills (3) Ability to understand hospital workload and fiscal reports and relate to clinical practice (4) Ability to deal well with people. In her book, Baschon provides examples of position descriptions.

UM Committee. The UM committee is ultimately responsible for developing a UM plan and overseeing its implementation. They are also responsible for monitoring and evaluating UM activities and taking appropriate action. The committee members should maintain constant contact with the medical staff communicating UM issues as needed. Education will be their strongest tool. Hospitals with a weak committee should reorganize and restructure. There should be representatives from every major department or service as well as administration, fiscal, patient administration, quality assurance, and nursing. Baschon recommends that only physician members have voting privileges. All members, particularly physician members, must be supportive of UM. Committee members should receive education on UM issues and activities.[6]

Physician Advisors. Every UM program should have a network of physician advisors who serve as facilitators to resolve disagreements between the UM department and the medical staff. Physician advisors review cases referred by staff when the medical necessity or need

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[6] Detailed guidance for UM committees is provided in Baschon's book, *A Complete Guide to Utilization Management: A Practical Approach for Program Design, Implementation and Evaluation.*

for continued is no documented and the attending physician does not concur.[7] Having ER physicians serving as physician advisors resolves problems related to after hours coverage.

Coordination and Integration. As discussed in chapter two, UM is closely intertwined with QA and RM as well as other hospital cost containment programs. However, given the historical development of these programs in the military, all too often what are now interrelated functions are being performed in isolation of each other, resulting in duplication of effort and lack of coordination. For example, a hospital may have a staff of QA reviewers reviewing records for QA issues and a separate group reviewing records for UM issues. Since MTFs are billing third party payers for services provided, fiscal and patient administration functions are becoming increasingly dependent on UM activities. In larger facilities functions assigned physically and organizationally distant from one another make coordination and integration more difficult (M. Morrison, M. DeHerrera, D. Breier, personal

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[7] Excellent position descriptions for physician advisors can be found in Baschon's book, *A Complete Guide to Utilization Management: A Practical Approach to Program Design, Implementation, and Evaluation.*

communication, June 24, 1992). Each MTF will have to assess its goals and objectives with regard to UM and decide how to organize these functions to ensure efficiency in organization. Facilities may choose bringing QA/UM/RM, admissions, medical records, and billing functions all under one organizational unit to improve information integration.

It is also important to consider how data and information will be managed and to develop parameters and focus. Oftentimes departmental-oriented microcomputer-based systems have been developed and implemented to meet individual user priorities instead of hospital-wide goals and objectives. Fragmentation of data and information may exist. Bittle and Bloomrose (1990) provide detailed in-depth guidance, recommendations and checklists for creating a coordinated, usable database.

There are a variety of software packages available and in development in the civilian market designed to help managed care organizations with UM. They include but are not limited to the following: Value Health Sciences has Medical Review System (MRS) for inpatient care and Practice Review system (PRS) for outpatient physician services. SMS corporation's decision support

system, Performance Manager, "uses the hospital's wib historical data to produce multi-layered reports ranging from broad studies to specific examinations" (White, 1990, p. 44). Parkside Health Care Management Corps Technology Review program performs cost utilization reviews of high technology care such as , coronary angioplasty, carotid endarterectomy, caesarean section and lithotripsy (Kenkel, 1988). MHC company developed a physician office utilization review program which identifies and tracks high use patients and physicians. The criteria developed for this program includes over 500 diagnoses. Each diagnosis is assigned a level of severity indicating number and the type of allowable visits as well as required medical tests (Kenkel, 1988)

The scope of this project does not include a thorough review of specific products on market. However, it should be mentioned that many software packages do exist which may be beneficial in an MTF setting.

Part Four: An Effective Inpatient UM Program is in Place.

Every MTF providing inpatient services should have an inpatient UM program. The greatest savings in the civilian healthcare sector has been achieved through the implementation of an aggressive, well-planned, and efficient inpatient UM programs (Wickizer, Feldstein, and Wheeler, 1988; Wickizer, Wheeler, and Feldstein, 1989).

An MTF inpatient UM program should be comprised of an effective combination of the following activities: preadmission review, admission review, concurrent review, discharge planning and retrospective review. These reviews should be based on appropriate screening criteria and, most importantly, they should be focused. A strong observation bed program should be in place and medical record documentation must meet the needs of the UM program implemented. What follows is a brief description of the above mentioned activities.[8]

Preadmission Review. One of most effective types of review, preadmission review, is performed to determine

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[8] Detailed policies and procedures for different types of review are available in Baschon's book, *A Complete Guide to Utilization Management: A Practical Approach to Program Design, Implementation and Evaluation*,

whether an admission is both necessary and appropriate (Baschon, 1992). In her study Booth, Ludke, Wakefield, Kern, and du Mond (1991) found that a preadmission review program not only eliminated unnecessary admissions but also inappropriate days of care.

Some of the benefits gained from an effective preadmission review program include: 1) Preadmission testing must be scheduled at least 72 hours ahead of admission of elective surgical cases avoiding admissions of patients with abnormal test results. Ancillary services managers will have more flexibility in scheduling; 2) Consults and pre-operative teaching can be scheduled in the outpatient setting prior to admission. 3) Required discharge planning will be identified at the onset; 4) Patients can be directed to an observation status vice an inpatient status, if indicated (Baschon, 1992); and 5) Preauthorizations for admission required by third party payers can be obtained.

A preadmission review program cannot be implemented rapidly, especially in MTFs that have no experience in UM activities. Baschon (1992) believes that four to six months are generally necessary to gather input from affected departments and resolve all potential problems

associated with this additional requirement. However, in the civilian environment, hospital and physician geographic and organizational relationships are much more varied and complex. Less time will probably be needed in the MTF setting. The goal is to make a transparent process, both to physicians and patients.

All admissions should be subject to preadmission review; however, MTFs should perform targeted reviews (see section on focused reviews). Supplying a UM nurse in the hospital admissions department may be the most effective method for an MTF to implement this program. Preadmission screening in the admissions department by a registered nurse is frequently done in the civilian setting (M. Morrison, personal communication, June 17, 1992).

Baschon (1992) warns urgent/emergent admissions are primarily the most problematic area for preadmission review programs. After-hours coverage must also be addressed; without which physicians may by-pass the system by admitting patients after hours. Baschon recommends having at least one member of the Emergency Medicine staff a UM physician advisor. Additionally, specific training could be provided to Emergency Medicine department personnel. Minimally, UM

department should be fully staffed during high admitting hours.

The screening criteria used to determine if an admission is appropriate and necessary is perhaps a critical component of a preadmission review program. Since screening criteria applies to all forms of review, a special section is dedicated to it later in this chapter.

Admission Review. The purpose of admission review is to validate preadmission review and to evaluate admissions that did not receive preadmission review. All patients should be subject to review. The validity and reliability of the screening criteria used is essential to the effectiveness of the program. (See section below on screening criteria)

Concurrent/Continued Stay Review. The purpose of continued stay review program is to ensure that inpatient care is still necessary and that the care is being delivered at the appropriate level. The review is performed periodically throughout the patient's hospital stay (Baschon, 1992). Baschon recommends that fifty to sixty percent of the patient population be reviewed concurrently.

Continued stay reviews can provide UM staff with a

great deal of information to help make recommendations for improving hospital processes, systems, and communications. Baschon (1992) proposes that the UM staff ask the following questions during continued stay reviews:

- Does the patient still require acute care?
- Are there any delays in service?
- Are all tests appropriate?
- Are there complications, and if so, were they treated appropriately?
- Does the documentation address all abnormal or unusual complications and occurrences?
- Are abnormal results of lab work or procedur = adequately documented?
- Are unrelated conditions that do not require intervention being evaluated or treated?
- Are there discharge planning needs that have not been addressed? (p. 77)

Baschon also recommends the following action based on problems discovered from the above questions:

- Discussion with nursing or ancillary department staff, attending physician, discharge planner or administration
- Referral to physician advisor or UM Committee for

assistance.

- Referral to appropriate hospital or medical staff department or committee. (p. 77)

Discharge Planning. The goal of discharge planning is to release "the patient in a timely manner, to a safe environment" (p.146). The responsibility for discharge planning may be assigned to the social work department, the nursing staff, a discharge planning staff, the UM department or some combination thereof. Regardless of the structure, strong formal and informal lines of communication are required among all of the key players to include physicians, nursing staff, discharge planner, and allied health staff. In addition to verbal communication, the patient's chart should document all discharge planning discussions and patient's agreement (Baschon, 1992).

In order to identify those patients needing discharge planning services, each hospital should develop high risk discharge planning screens focusing on categories of age, diagnoses, and social factors. These screens should be used as part of the preadmission review process. Advance notification can then be given to the discharge planner for cases requiring intense discharge planning assistance

(Baschon, 1992).[9]

Elective surgery patients should be screened prior to admission. Other admissions can be screened within 24 hours of admission and if no discharge planning is needed, reevaluated periodically. Patients in high risk categories should have documentation of discharge planning in their charts within 48 hours of admission (Baschon, 1992).

Discharge planning in the outpatient area can help reduce social admissions by assisting patients in obtaining the necessary services to keep them in an outpatient status (Baschon, 1992).

Baschon recommends that every department providing direct patient care should have policies and procedures addressing discharge planning (Baschon, 1992).

Retrospective Review. The purpose of retrospective review is to ensure that:

- Admission was medically necessary.
- Care provided was appropriate.
- Discharge planning was initiated in a timely manner.
- There were no quality problems.

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[9] Examples of high risk screens are provided in Baschon's book, *A Complete Guide to Utilization Management: A Practical Approach to Program Design, Implementation, and Evaluation.*

- There were no delays in service.
- Documentation addresses all aspects of care; abnormal values are addressed.
- Work-ups unrelated to the reason for admission are not included unless absolutely necessary. (Baschon, 1992, p. 78)
- Use of consults/referrals was necessary and appropriate. (Stockmyer, personal communication, March 3, 1992)

Retrospective review will serve the hospital best when used to confirm trends and patterns suspected during the real time reviews. In addition to overutilization, underutilization information can be collected and studied (Baschon, 1992).

Screening Criteria. MTFs must carefully consider what screening criteria will be used to perform the above described reviews. Factors to be considered involve automation support, number of staff available, and staff knowledge and experience. Screening criteria is "a generic term used to describe a set of clinical data elements" (Baschon, 1992, p. 54). The criteria is used by the UM staff to objectively determine whether a patient requires hospitalization (Baschon, 1992). A number of criteria sets available. What follows is a

description of the more commonly used ones

Severity of Illness/Intensity of Service (SI/IS) is perhaps the most commonly used criteria set. The CHAMPUS Peer Review program contractors are required to use this criteria set as published by InterQual, Inc., Marlborough, MA. Since it is likely that DoD will encourage consistent application of criteria both in the CHAMPUS program and in the direct care system, MTFs should seriously consider using this criteria set (B. Carson, personal communication, July 15, 1992). SI addresses the patients symptoms at the time of admission; IS describes the type and frequency of treatments expected for particular symptoms or diagnoses (Baschon, 1992).

Appropriateness Evaluation Protocol (AEP) uses SI/IS criteria but also evaluates the appropriateness subsequent individual days of care. Some find this criteria less strict and consequently is not as popular as SI/IS (Payne, Restuccia, Ash, Shwartz, Tarr, and Williams, 1991).

Discharge Screening Criteria help staff determine if a patient has recovered and is ready for discharge. *Length of stay (LOS) criteria* are the basis of HCFA's Mean LOS assigned to DRGs. UM staff simply compare

actual LOSs against norms (Baschon, 1992).

Some MTFs may choose to use internally developed criteria instead. The medical may be more receptive to criteria that they have developed and should be encouraged to develop medical practice protocols (Demarco & Fox, 1989b).

Boland (1989) emphasizes that whatever criteria an MTF chooses, ensure that the goal is to measure outcomes as opposed to a process (Boland, 1989).

Focused Reviews. Focused utilization management has been proven to result in the best care at the lowest possible price (Boland, 1989).

> Employers and insurers now recognize that most traditional utilization review produces short-term savings, but only at great cost. As a result, more emphasis is being placed on focused utilization review. Well designed utilization management programs achieve desired medical outcomes at lowest possible cost. (Boland, 1989, p. 54)

Booth et. al. (1991) conducted a study involving focused review. The objective of their study was "to recommend ways of focusing resources for targeted, efficient utilization programs to generate timely and accurate information" (p. 421). Booth et. al.

discovered that a preadmission review program, not only eliminated unnecessary admissions, but inappropriate days of care.

> Therefore these results strongly argue for a utilization management program with intensive preadmission screening to eliminate unnecessary admissions, followed by focused reviews on the timeliness of surgery (where inpatient surgery is justified) and reporting procedures for test results and consultations. Focused reviews should also be performed on medical admissions as soon as possible after admission to identify patients in need of discharge planning and awaiting nursing home placement. (p. 438)

Performing *all* of the previously described reviews on *all* patients would be an ambitious undertaking resulting in minimal savings. UM staff need time to perform reviews and more importantly, time for problem solving. To perform focus/problem oriented reviews, the UM coordinator must identify high cost[10] and high

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[10] Identifying high cost diagnoses and DRGs in military hospitals is often more difficult than in the civilian sector since military cost accounting systems are limited. Naval Hospital San Diego is gradually establishing a decentralized accounting system improve cost accountability. This began by establishing departmental/divisional Operating Targets (OPTARS) and, over time, charging more and more items to individual OPTARs

LOS diagnosis and DRGs (Baschon, 1992). Baschon notes that most problem DRGs or diagnoses are a result of one of the following:

> Disease-related complications
>
> Comorbid conditions
>
> Nosocomial infections
>
> Iatrogenic complications
>
> Overutilization of resources
>
> Delays in service (p. 68)

In addition to reviewing ALOS for different DRGs, MTFs should also regularly review their case mix index. At present, it is undetermined how MTFs will be reimbursed in a DRG system and whether hospital-based reimbursement rates will be established based on individual MTF case mixes. This possibility elevates the importance of ensuring that all admissions are indeed necessary and appropriate. Too many unnecessary low intensity cases will lower hospital's case mix . Under a budgeting system based on workload, it is preferable to admit patients since reimbursement is

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to include supplies, medical repair, travel, supplemental care, etc. Departments/divisions will soon be provided with software to track detailed costs (C. Rosciam, personal communication, June 25, 1992). In the future, work centers might be able to identify costs for individual episodes of care and provide that information to physicians.

greater in the inpatient setting.

Besides focusing on problem DRG or diagnoses, reviews can focus on problem providers (Baschon, 1992). Baigelman (1991) found that physicians were much more receptive to comparisons within the same department rather than against national averages. Provider productivity information can be gathered by performing focused retrospective reviews.

Regardless of the basis for the focused review, Baschon reminds her reader that all patients should be subject to review. DRGs and diagnoses that have been focused out should be reviewed at least quarterly to ensure that problems are not developing.

A review of literature provided a number of references describing tools and techniques for focused reviews as well as guidance. Ash, Shwartz, Payne, and Restuccia (1990) introduce and describe the Self-Adapting Focused Review System (SAFRS). SAFRS is a tool for hospitals to perform focused reviews but wanting a proven tool to assist them. SAFRS is "an adaptive approach to record selection that is based upon model-weighted probability sampling" (p. 1025). However, the system requires some degree of computer sophistication to include availability and integration

of information from other areas of the hospital.

Strumwasser, Paranipe, Ronis, Share, and Sell (1989) describe and compare three focused UM strategies:

1) Focused reviews on major diagnostic categories (MDC) with rates of nonacute admissions equal to or exceeding 20%.
2) Focused reviews on MDCs with concentration ratios (the ratio of the proportion of all nonacute admissions to the proportion of all admissions [greater than] 1.00.
3) Focused reviews on DRGs with concentration ratios [greater than] 1.00. (p. 246)

Rowland and Rowland's (1984) Care Level and Timeliness Review (CLTR) "process is based on a retrospective review of a random sample of medical records . . . ." (p. 657).

Whatever tools or techniques are used, program managers should ensure that the review system measures outcomes instead of the processes (Boland, 1989). Program managers should also be aware that reducing the ALOS may increase the intensity and amount of ancillary utilization thereby negating any positive financial affects (Baschon, 1992). This is especially critical in a prospective payment or DRG reimbursement system.

Part five of the model discusses this problem in greater depth.

Observation Beds/Status. A formal observation bed program should be established in hospitals (Baschon, 1992). JCAHO standards require that hospitals have written policies and procedures for observation beds (Accreditation Manual for Hospitals, 1992).

Within the last 10 years, hospitals have placed greater emphasis on the issue of observation due to denial of payments for admissions. Patients who are in an observation status do not require admission. As a result, civilian hospitals have designated certain beds as observation beds. However, this can be confusing. The term "observation" may mean different things to different people. Baschon suggests that physicians be trained to "admit" patients to an inpatient status and "assign" patients to observation status.[11]

Medical Record. The medical record serves as the primary source document for UM information. Baschon (1992) states:

> The medical record is used to document the care and treatment a patient receives during

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[11] Baschon (1992) provides good examples of observation bed policies and procedures.

> hospitalization. It is the primary means of communication for all those involved in caring for the patient. Thus, it is essential for the documentation to provide a comprehensive account of the course of treatment as well as the patient's response. (p. 25)

The reviews described in this model cannot be performed unless the inpatient medical record is:

1) Comprehensive/Complete
2) Well Documented
3) Timely
4) Legible (Lorenz, Jones, Lawson, & Leblond, 1989, p.vi)

All hospital employees, including nurses, physicians and support staff, who document in the medical record should be given adequate training (Baschon, 1992). Accurate and complete coding and documentation in the medical record is essential. Furthermore, DRGs should be updated periodically during patient stays to account for complications and comorbidities (M. Morrison, personal communication, June 24, 1992).

Part five: Hospital has a Strong Resource Management Program.

Once an effective program has been established to ensure the appropriateness of hospital admissions, hospital's should evaluate how resources are being used during the patient's stay. This part of the model focuses on two areas that generally impact the most on hospital costs: ancillary service utilization and delays in service (Baschon, 1992).

MTFs will discover that focusing first on ancillary service utilization will provide them with the greatest savings. As discussed earlier, a strong inpatient UM program may actually do more harm than good by encouraging increased ancillary utilization (Baschon, 1992). Clinical practice guidelines, as discussed in chapter two, can provide the tools necessary to encourage cost-effective physician practice patterns. Baschon recommends that departments develop internal guidelines if the medical staff is resistant to accepting national norms. It is the responsibility of the entire hospital staff to ensure that cost effective measures are instituted to curb excessive resource utilization.

UM programs should monitor ancillary resource usage,

identify areas where the largest potential for improvement exists, and commission studies to research suspected problems. Study findings should be published and practice guidelines developed (Baschon, 1992). Total Quality Management (TQM) techniques can be very effective with process or system studies. Typical problems uncovered include:

> . . . use of high cost drugs when more economical alternatives exist, use of high tech procedures (MRI, PET) rather than clinically appropriate, less expensive scans, overuse of telemetry beds and special care units, work-ups unrelated to the principal diagnosis, use of standing admission orders, use of expensive prosthetics (Baschon, 1992, p. 175-176).

Typical problems in the military setting involve overuse of supplemental care and misuse of special liberty privileges. Although special liberty days are often subtracted from total days of stay, beds cannot be filled. Also, policies and procedures regarding reporting of subsisting at home (SAH) days should be modified to reflect economic changes and budgetary constraints. .

Steiner, Root, and White (1991) attribute (nonpatient attributable) variation in resource consumption in most hospitals to differences in providers' practice styles. Care provided to similar patients with same diagnoses may vary tremendously without explanation.

Steiner et. al. performed a study to compare the expected ratio of laboratory costs to total inpatient costs to the actual ratio for a New England academic medical center. The authors found that costs ran on the average 39% higher than expected. The authors state that:

> ...careful laboratory cost analyses will become increasingly important as the proportion of patients reimbursed in a fixed manner grows. The future may hold a prospective zero-based laboratory budgeting process based on predictable patterns of DRG admissions or other fixed-reimbursement admission and laboratory utilization patterns.....therefore determining the *appropriate* usage of laboratory services is a crucial concern. (p. 1-2)

Steiner states that most hospitals have implemented aggressive cost cutting programs in laboratories. What is needed is meaningful guidelines that incorporate

algorithms and decision trees.

For certain problem prone DRGs/diagnoses, hospitals may choose to implement a case management program using clinical progressions. A clinical progression (also known as critical/clinical path) is:

> . . . a flow chart that identifies important aspects of patient care for a particular diagnosis. It is generally written in calendar form with patient milestones and nursing interventions noted on the hospital day they are expected to occur. Not every patient will meet every milestone on the expected stay. The clinical progression represents expectations for the majority of patients within the diagnosis . . . . Clinical progressions offer tremendous opportunities for reducing length of stay and resource consumption. (Baschon, 1992, p. 195)

Clinical departments should be encouraged to develop and use guidelines, standards, and protocols for tests, treatments, procedures, medications, diagnostic workups, LOS, etc (Baschon, 1992).

Another area MTFs may choose to focus is studying the problems causing avoidable hospital days. In most cases avoidable hospital days are the result of delays in service (Baschon, 1992). Generally specific delays

fall into one of four categories:

(1) Hospital delays

(2) Physician delays

(3) Patient and family delays

(4) Outside Agency delays (Baschon, 1992, p. 180).

These delays and the number of avoidable hospital days resulting should be tracked and reported on a regular basis. Trends should be easily identifiable and targeted for studies (Baschon, 1992).[12] In MTFs patients may be admitted because inpatients have higher priority for obtaining tests and studies than outpatients (J. Ungersma, personal communication, June 17, 1992).

An Effective Outpatient UM Program is in Place.

Aggressive inpatient UM programs have contributed to decrease in percent of inpatient costs, and increase in percent of outpatient costs (Bacon, 1991).

In a recent article, Green (1992) points out that the number of surgeries performed in outpatient settings has exceeded, for the first time, the number of surgeries performed in inpatient settings.

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[12] Baschon (1992) describes in her book a detailed system, complete with sample forms and coding structure as does Rowland and Rowland (1984). Both of these sources should be consulted prior to developing a program to address delays in services.

Inpatient surgeries decreased from 16 million in 1980 to 10.8 million in 1990 while outpatient surgeries increased from three million to 11.07 million.

Outpatient UR programs have been more difficult to implement by payers. The manner in which outpatient care is delivered is different from inpatient in three important ways: (1) volume is higher, (2) costs are lower, and (3) number of care locations is greater (Bacon, 1991). MTFs have an advantage over civilian hospitals in that a majority of outpatient care is delivered in the MTF and by MTF providers instead of in a multitude of throughout a city.

Bacon (1991) recommends instituting an outpatient precertification program for very costly procedures such as surgery, arthroscopy, colonscopy, MRIs, and CAT Scans which represent 20-25% of costs of ambulatory care. Individual review of each health care encounter will provide only marginal savings. Bacon also recommends performing retrospective review. He suggests establishing a database to allow profiling of providers.

As described in part three of the model, MHC's physician office utilization review program which identifies and tracks high use patients and physicians

may be a very beneficial tool in an outpatient UM program (Kenkel, 1988).

Finally, facility planners must realize that a strong inpatient UM program may result in need to create additional outpatient areas (Demarco, & Fox, 1989).

Monitoring and Evaluation

Perhaps the most critical element in any hospital UM program is a system to monitor, evaluate, and measure program performance. As discussed in part three of the model, the hospital information management system must support coordinated and integrated UM functions. In addition, the information system should support extraction of data for monitoring, evaluating, and measuring functions. For example, denied admissions, avoided patient days, etc., should be extracted from the system easily as well as automatically quantified (Chan, Wages, Hernandez & Bernstein, 1990).

In her article, Connor (1988) discusses ways to assess the effectiveness of a hospital UM Program. Even though the focus of her UM program is to avoid adverse action from external organizations and is written for the civilian sector, her suggestions can be helpful for MTFs. She recommends an assessment of the

current situation to include a retrospective audit of a sample of medical records, an analysis of third party payor denials, a thorough analysis of the UM process and documentation to assess accuracy and quality, and a comparison of the hospital with its peer group to determine problem areas.

Expert Panel Review

The UM model presented in this paper was validated by a panel of UM experts from both the civilian and military communities. The members of the panels are listed below:

1) Ms. Betty Carson, Director, Quality Management/Utilization Management, CHAMPUS Division, AETNA Health Plans, San Diego, CA
2) Ms. Marlene Morrison, DRG Consultant, Health Care Planning and Development Office, Naval Hospital, San Diego, CA
3) Captain John Montgomery, Director, Health Care Planning and Development Office, Naval Hospital, San Diego, CA
4) Captain James Johnson, Medical Director, Naval Hospital, San Diego, CA
5) Lieutenant Commander B. T. Miller, Executive Officer, Health Care Finance, Office of

Assistant Secretary of Defense for Health Affairs, Washington, DC

Results of the expert panel review.

The model presented in this chapter is not significantly different from the original that was submitted to the expert panel for review. The majority of the comments made by the panel members were editorial in nature. However, a few significant criticisms were provided by the panel. One panel member stated that the discussion in the methodology section was insufficient. A second panel member stated that he doubted that the model was a "model." Instead he felt that what was developed was a listing and discussion of things which should be considered in developing a UM program. These comments will be used when used in the future during further refining and validation of this project.

IV. Conclusion

Throughout this paper the emphasis behind the need for a model has been a financial one. Health care in the DoD, as with the rest of the country, is becoming prohibitively expensive. The reality must be faced that everything cannot be done for everyone. Bluestein (1988) writes the following for fellow utilization review professionals:

> One of our assumptions is that we should spend any amount of dollars if a life is at stake . . . . A major responsibility of those professionals engaged in UR and QA is learning how and when to say no to unnecessary admissions and bed days, to inefficient diagnostic regimens and inappropriate treatment plans, and perhaps, ultimately, learning to say no to services which provide some benefits but which cost more than they are worth. (p. 11)

MTF staff must ensure that all medical delivered is absolutely necessary and appropriate. Even though escalating health care costs in DoD is an important issue, the human impact of this issue must not be overshadowed.

Hospital staff and military beneficiaries are rarely aware of the costs involved in providing medical

services in an MTF. DoD beneficiaries are not billed for the care received at MTFs and many believe that they are immune from the financial hardships facing their civilian counterparts related to healthcare costs. The latter is not true. The consequences of denying care in the direct care system can be financially devastating. Learning the number of medicare-eligible DoD beneficiaries who have suffered tremendous financial hardship because they were forced to seek care outside of the MTF without supplemental insurance may be shocking. Even worse is the likely possibility that care could have been provided in the MTF had resources been managed better. An effective UM program will help the MTF provide the most care possible to the most beneficiaries possible given the amount of resources available.

The model presented in this paper can provide MTF staff with significant guidance as they begin the same journey started almost 10 years ago by their civilian counterparts. The model is unique in that it draws upon the civilian literature but is specifically written for UM coordinators in MTFs. The purpose of this paper is not to provide an exact step-by-step guide for utilization management at MTFs, but instead,

to give the reader a full appreciation for the complexities and possibilities of UM given the experience and analyses of others. Given that, MTF staff are the best judges of what will make a difference in their facilities.

Utilization management is a field still in its early stages of development and evaluation. This model, even as it is finished, is already out of date. The model should be periodically updated and refined to reflect the most recent literature. Additional reviews by experts in UM is recommended as well as application of the model to specific MTF UM programs.

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APPENDIX A

RECOMMENDED READINGS

Recommended Readings
Arranged by Subject

UM PROFESSION

Specialization in clinical performance monitoring: What it is and how to achieve it. A. Donabedian, (1990). Quality Assurance and Utilization Review, 5(4), 114-120.

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