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14. ABSTRACT The 121st General Hospital, Seoul, South Korea, is the only Army Medical Treatment Facility for all United States armed forces assigned to the Republic of Korea. The 121st currently lacks a same-day surgery program and likely has never had such a program. The purpose of this study is to analyze the variables and factors which have prevented the 121st General Hospital from implementing a same-day surgery (SDS) program, and determine if a SDS program is a feasible alternative to the current status quo. A study of surgical utilization for fiscal year (FY) 2004 was conducted. A comparison of inpatient surgeries performed at the 121st General Hospital in FY 2004 with the Centers for Medicare and Medicaid Services (CMS) most current list of approved ambulatory surgeries was completed. The results showed that 11% of the inpatient surgeries met ambulatory surgery criteria and amounted to a cost difference of \$1,663,628. The results also showed that 28% of all FY 2004 surgeries lasted less than 24 hours meeting the criteria to be coded as outpatient surgeries.						
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in Health Care Administration

Same Day Surgery at the 121st General Hospital
Seoul, South Korea

A Graduate Management Project Proposal
in Partial Fulfillment of the Requirements for
a Master Degree in Health Care Administration

By

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Abstract

The 121st General Hospital, Seoul, South Korea, is the only Army Medical Treatment Facility for all United States armed forces assigned to the Republic of Korea. The 121st currently lacks a same-day surgery program and likely has never had such a program. The purpose of this study is to analyze the variables and factors which have prevented the 121st General Hospital from implementing a same-day surgery (SDS) program, and determine if a SDS program is a feasible alternative to the current status quo. A study of surgical utilization for fiscal year (FY) 2004 was conducted. A comparison of inpatient surgeries performed at the 121st General Hospital in FY 2004 with the Centers for Medicare and Medicaid Services (CMS) most current list of approved ambulatory surgeries was completed. The results showed that 11% of the inpatient surgeries met ambulatory surgery criteria and amounted to a cost difference of \$1,663,628. The results also showed that 28% of all FY 2004 surgeries lasted less than 24 hours meeting the criteria to be coded as outpatient surgeries. Analysis of the results indicated that a hospital-based integrated same day surgery program could be implement with accurate coding and subtle changes with the current flow of surgical patients.

Disclosure Per Army Regulation 360-5

“The assumptions, opinions, or assertions expressed in this publication are the private views of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.”

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Same Day Surgery at the 121st General Hospital

This project will analyze the factors and variables that have fostered an inpatient environment for the majority of the surgical patients at the 121st General Hospital (GH). In doing so, the researcher's intent is to clearly establish whether a formally established Same Day Surgery (SDS) program at the 121st GH is feasible and has the potential to provide added benefits as well as improvements to the overall surgical process.

The 121st GH is located in Seoul, South Korea. Seoul is the capital of the Republic of Korea (ROK) and its population of 12 million residents represents 25% of the total ROK population. Korea was virtually unknown to the rest of the world until the start of the Korean War in 1950. At that time, Korea became a battleground of communist and democratic ideologies. Since then it has been a divided country with the United Nations maintaining a buffer zone between the communist system in the North and a democratic system in the South.

The 121st GH is the only Army Hospital on the Korean peninsula, and thus serves as the primary definitive care hospital for the United States armed forces assigned to the ROK. It provides an array of clinical and ancillary health care services to its patient population (Table 1) and receives a significant number of referred patients from outlying health care facilities that fall under the hospital's higher command, the 18th Medical Command (18th MEDCOM). As the only U.S. controlled hospital in the Seoul metropolitan area, the 121st GH also treats nonmilitary patients, such as Department of Defense (DOD) civilians, Department of Defense Dependent School (DODDS) personnel, U.S. Embassy personnel, and contractors (Carden, 1998).

Table 1

Services provided at the 121st General Hospital

Primary Care Services	Inpatient Units
Ambulance and Emergency Medical Services	Inpatient Psychiatry
Primary Care Clinic	Intensive Care Unit
Internal Medicine Clinic	Multi Care Unit
Pediatric Clinic	Post Anesthesia Care Unit
Well Baby Clinic	Women and Infant Care Unit
Specialty Clinics – Behavioral Medicine	Specialty Clinic – Medical
Alcohol and Treatment Center	Dermatology Clinic
Exceptional Family Member Program	Immunization Clinic
Mental Health Clinic	Neurology Clinic
Specialty Clinics – Support	Specialty Clinics – Surgical
Chaplain Services	Eye, Ear, Nose, Throat Clinic
Laboratory Services	Obstetrics and Gynecology Clinic
Nutrition Care Clinic	Ophthalmology Clinic
Occupational Therapy Clinic	Optometry Clinic
Pharmacy Services	Oral and Maxillofacial Surgery Clinic
Physical Therapy Clinic	Orthopedic Clinic
Pre-Admission Unit	General Surgery Clinic
Radiology Services	

Conditions that Prompted the Study

The 121st GH's daily activities of providing health care are very similar to other hospitals within the Army's inventory. However, the 121st GH, unlike most, if not all Army MTFs, does not have a SDS program. The term "same day surgery" connotes a variety of definitions such as ambulatory surgery, outpatient surgery, one-day surgery, in-and-out surgery and come-and-go surgery, to name a few. Same day surgery, ambulatory surgery, and outpatient surgery are used interchangeably within this paper. These terms generally refer to surgical procedures which are complex enough to require the technical support of a dedicated operation room setting and specially trained staff, but do not do not require the full support of a

hospital setting or an overnight stay. Same day surgery allows surgeons to treat patients more quickly and for less money than is possible with inpatient surgery. In this era of budget cutting and trying to do more with less, it initially seems counterintuitive at that the 121st GH admits the majority of its surgical patients, although similar patients at other MTFs are not admitted and are released to their homes the same day of the surgery for a significantly lower cost to the patient and hospital (Richard, 2000). Are there other less apparent factors preventing or deterring the organization from implementing a same day surgery program? The researcher will attempt to clearly answer this question.

Statement of the Problem

The 121st GH currently groups all surgical patients together in its surgical process, and codes the majority of cases as inpatient regardless of the procedure or amount of time the patient is in the facility. Gastrointestinal (GI) procedures (Table 2), known at the 121st GH as *special procedures*, and oral surgeries are the only procedures performed in the new SDS suite, and the only procedures coded as outpatient surgeries. If the hospital implemented a SDS program, all ambulatory surgeries would be coded with a SDS flag as *same day surgeries* falling under the ambulatory procedure unit (WISDOM Course, 2006). The other issue to be addressed is the flow of patients in its current form and whether this process can be improved. The current flow of all surgical patients is working, but appears to have areas in need of improvement (Thornton, 2006a). Current literature and financial reimbursement strategies suggest that establishing a same day surgery program may result in a considerable cost savings as well as an improved surgical process promoting better care to all surgical patients with increased efficiency and harmony for the 121st staff (Culver, 1995).

Table 2

Full Cost for FY 2004 Ambulatory/Same Day Procedure Visits

CPT	PRIMARY OUTPATIENT PROCEDURES	ENCOUNTERS	FULL COST
43239	UPPER GI ENDOSCOPY, BIOPSY	150	\$120,776.98
45378	DIAGNOSTIC COLONOSCOPY	127	\$139,495.68
45380	COLONOSCOPY AND BIOPSY	50	\$56,878.36
43235	UPPER GI ENDOSCOPY, DIAGNOSIS	44	\$35,226.80
93318	ECHOCADIOGRAPHY, TRANSESOPHAGEAL (TEE)	22	\$9,036.38
93307	ECHO EXAM OF HEART	2	\$1,028.80
43259	ENDOSCOPIC ULTRASOUND EXAM	1	\$1,343.58
43631	REMOVAL OF STOMACH, PARTIAL	1	\$1,080.24
44394	COLONOSCOPY W/SNARE	1	\$1,110.12
45330	SIGMOIDOSCOPY, DIAGNOSTIC	1	\$332.64
45385	COLONOSCOPY, LESION REMOVAL	1	\$1,129.87
	Totals	400	\$367,439.45

In addition to the concerns related to coding and flow of all surgeries performed, the length of time it takes for a surgical inpatient to be discharged after an operation is a concern not only for the bill payers, but for surgical patients and commanders of U.S. military units located in South Korea. Many patients want to get back to the comfort of their homes after surgery, and commanders want as many of their soldiers available to train and prepared to defend the Korean peninsula.

It is important to note that the hospital's Governing Board is concerned about how all surgical cases are being managed at the 121st General Hospital. Consequently, a process action team (PAT) was formed to analyze the current surgery process. The PAT used the FOCUS PDCA model to guide its progress with the goal of implementing the best surgical process for the hospital's patients and staff. It was the researchers hope that the PAT would assist with determining if SDS is feasible at the 121st GH. The PAT was made up of subject matter experts from all major areas within the facility that have a specific responsibility with

the current surgical process. Each individual has a vested interest in improving the way surgeries are handled at the 121st GH.

Literature Review

Before delving into discussion about same day surgery in its modern form, it is important to review the progression of inpatient care and hospitals, managed care, and outpatient care, and how each have played important roles in the evolution of health care over the past several decades leading to same day surgery as we know it today.

Inpatient Care and Hospitals

The term *inpatient* is used to describe an overnight stay in a hospital where the patient is lodged to receive diagnostic and therapeutic care for a particular medical condition. An *inpatient day* is a night spent in the hospital by a person admitted as an inpatient. According to the American Hospital Association (AHA), a *hospital* is an institution with at least six beds that must be licensed with an organized physician staff and continuous nursing services under the supervision of registered nurses. A hospital must have an established governing body that is legally responsible for the conduct of the hospital staff. The chief executive heads the governing body and has responsibility for the operation of the hospital. Other characteristics of a hospital include maintenance of medical records on each patient, pharmacy services maintained in the institution under the supervision of a registered pharmacist, and food service operations to meet the nutritional requirements of the patients. The construction and operation of hospitals today is governed by federal laws, state regulations, city ordinances, standards of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and national building, fire and sanitation codes (Shi & Singh, 2004).

Over the past 200 years, hospitals have evolved from shelters for the homeless and poor to technologically progressed facilities providing the latest medical care to the injured and ill. From 1840 to 1900, hospitals went from providing very basic and meager medical care to providing skilled medical and surgical care to the majority of the population. Along with providing health care, many hospitals became teaching and research facilities. The term “medical center” is used today by many of the larger hospitals to reflect their large number of specialized clinicians and wide scope of services. Over the past several decades, many hospitals have joined together to form medical systems delivering an even broader range of health care services.

After the Great Depression of the 1930s many hospitals were forced to close due to their inability to make a profit. The hospitals that were able to remain open did so with very little margin for error. From 1928 to 1937, 663 hospitals closed in the U.S. due partly to a lack of private health insurance. From the 1940s to today, health insurance provides a vehicle for patients to pay for health care and ensure the financial stability of hospitals throughout America (Shi & Singh, 2004).

The increase in health insurance has increased demand for health care services. These plans provided generous coverage for inpatient care, thus there were few restrictions on patients and physicians opting to have additional services performed that may have been clinically unwarranted. Not only did insurance companies allow unjustified expensive hospital services, they also paid whatever hospitals charged.

By the end of World War II, the nation was severely short of hospitals. Very little hospital construction took place since the start of the Great Depression and now our nation’s leaders felt inclined to establish legislation to foster the growth of hospitals throughout the

United States. The Hill-Burton Act of 1946 established legislation that provided federal grants to states for the construction of new community hospitals with the end state goal of 4.5 beds per 1000 population. In 1946, there were only 3.2 beds per 1000 population. The Hill-Burton program was instrumental in the construction of nearly 40% of the short-stay general hospitals in the United States. It even made it possible for small communities to have their own hospitals. By 1980, America had reached its goal of 4.5 community hospital beds per 1000 civilian population (Cronin, 1992).

The mid-1980s marked a sharp decline in the number of community hospitals and the total number of beds available in the United States. Rural community hospitals were more likely to be closed due to their inability to maintain a high bed census and pay for overhead costs. Concurrently, the average bed capacity per hospital declined from 196 beds in 1980 to 169 beds in 2000. Although the number of hospitals and beds had decreased significantly, the occupancy rates or percentage of beds occupied in community hospitals also declined from 75.6% in 1980 to 63.9% in 2000. Correspondingly, the average length of stay (ALOS) in community hospitals has declined from about 7.5 days in 1980 to 4.9 days in 2000. During this time period, a tremendous shift from inpatient to outpatient care has occurred. One of the main factors influencing this shift is the managed care initiative that spread throughout the country in the 1990s (Shi & Singh, 2004).

Managed Care

Managed care is an organized approach to delivering comprehensive health care services to a predetermined group of enrollees through well-organized management of these services. Managed care can be discussed in two different ways. First, it refers to a process of providing health care services through the integration of the functions of financing, insurance,

health care delivery, and payment of services provided. A significant part of this process is controlling utilization by having primary care providers coordinate the health care services of all enrollees. This method known as *gate keeping* is used to prevent uncontrolled utilization of health care services that are not clinically necessary. Second, managed care also refers to actual managed care organizations (MCOs) that deliver health care services without risk management by an insurance company or an organization that handles third-party payments. MCOs can use their own providers, contract providers, or a combination of the two (Shi & Singh, 2004).

Managed care financing is based on premiums which are established through contract negotiations between employers and the MCO. A fixed premium per enrollee, often termed as capitation or per member per month (PMPM) is used to cover the comprehensive health care services. As stated earlier, the MCO delivers services without the assistance of an insurance company to manage risk. Thus, the MCO assumes all risk taking the responsibility if the total cost of services provided exceeds the revenue from the capitated premiums. MCOs retain approximately 17% to 20% of the paid premiums to manage risk and to cover administrative expenses. The remaining portion is spent on providing health care and the MCO commits to providing comprehensive care to include preventative services, ambulatory and inpatient care, surgery, and rehabilitative services. To meet the health care requirements of their enrollees, some MCOs own their own hospitals, outpatient clinics, and employ their providers. Other MCOs facilitate mergers with health care facilities. Most MCOs establish contracts with hospitals, clinics, and providers to meet their patients' health care needs. MCO providers are paid by salary, discounted fees, or capitation. Salary providers are employees of the MCO who receive fixed salaries and often receive end-of-year bonuses

resulting from low utilization rates. Providers paid by a fee schedule have agreed to discount their regular fees in exchange for the volume of business the MCO brings them. Under capitation, the provider is paid a fixed monthly amount for each enrollee. As stated earlier, this is called per member per month payment and the provider receives this sum regardless of whether the enrollees use any services. Unlike a fee schedule, capitation also puts the risk on providers to offer comprehensive care at a reasonable cost with the goal of making a profit.

Although the widespread adoption of managed care occurred in the 1980s, the concept of managed care has been used sporadically for about a century. In 1882, Northern Pacific Railroad Beneficial Association was one of the first employers to provide medical care expense coverage. Between 1850 and 1900, there were several railroad, mining, and lumber companies that developed quasi-managed care programs to care for their employees who worked in isolated areas without nearby hospitals. Physicians were offered guaranteed salaries to provide care at these remote locations, thus helping to protect the health and welfare of the organization's workers. Other companies contracted with physicians and hospitals to provide care at a flat rate per worker per month, referred to today as capitation.

Due to escalating health care costs in the 1970s and 1980s, managed care became a widespread adopted concept to alleviate the dominant fee for service system that contained built-in incentives to incur higher costs than were necessary. Evidence suggests that managed care offered and continues to offer relief from the ballooning cost of health care in the United States (Shi & Singh, 2004).

Outpatient Care

In the early 1900s, outpatient care was geographically independent from inpatient services provided in hospitals. Physicians saw patients in their private clinics and often made

home visits to treat patients. Due to the limitations of medicine and technology, physicians provided a full spectrum of medical services including diagnosis, treatment, minor surgery and dispensing of medications. As medical science and technology improved, health care delivery to include outpatient care, became concentrated in hospitals. Hospitals had the necessary capital to purchase the most modern equipment and provide the widest array of outpatient services. Most independent providers lacked the capital to stay competitive with hospitals and thus felt pressure to adapt to the quickly changing marketplace. Consequently, most providers chose to join group practices or affiliate with a hospital to better cope with the competitive health care environment (Shi & Singh, 2004).

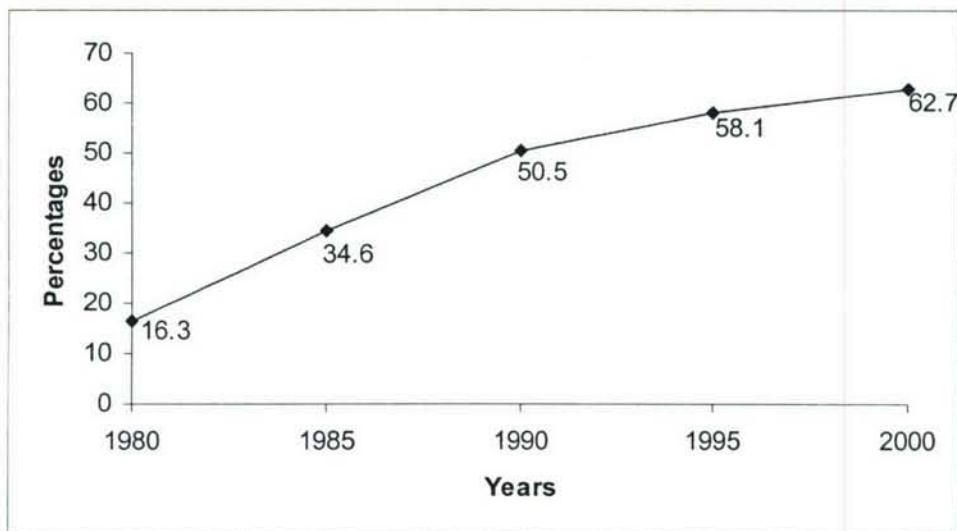
Outpatient services today refers to all health care services not provided with an overnight stay for 24 hours or more in an inpatient hospital. In recent years, the number and type of outpatient services has experienced extraordinary growth. This growth in turn caused a significant decrease in hospital occupancy rates forcing hospital executives to view outpatient care as a major product line on the same plane as inpatient care. As the need for large inpatient hospitals decreases, health care executives have realized the importance of obtaining a portion of the outpatient care market to survive in the ever changing competitive health care industry. Consequently, hospitals have expanded to outpatient services like same day surgery that would never had been considered when inpatient care was the prominent method of delivering health care. Duffy and Farley (1995) showed this shift to outpatient care in the form of SDS by presenting the 150 most frequently performed inpatient surgeries in hospitals in 1980. By 1987, 33 of the 150 procedures had declined in use by 40% because these procedures were shifted to outpatient settings. By 1990, more than one half of all surgeries performed by hospitals took place in an outpatient setting. The proportion of total

outpatient surgeries performed increased from 16.3% in 1980 to 62.7% in 2000 (Figure 1).

With increasing technology and the prospective payment system, it is not surprising that the decline in inpatient surgeries has actually been outweighed by the increased growth of outpatient surgeries.

Figure 1

Percentage of total surgeries performed in Outpatient Departments of Community Hospitals: 1980-2000



Same Day Surgery

Same day surgery has been defined as those surgeries that encompass surgical intervention that are more complex than office-based procedures performed under local anesthesia but less complex than major procedures requiring at least an overnight stay or more prolonged hospitalization (Detmer, 1981). It has also been defined as operative procedures performed in a surgical facility where admission and discharge of the patient occurs on the same day. The American College of Surgeons defines it as “surgery that is

performed under general, regional, or local anesthesia without overnight hospitalization (American College of Surgeons, 2004).

Same day surgery is not new to health care. Its earliest beginnings can be traced back to about 3000 BC through the Edwin Smith Surgical Papyrus, one of the earliest known scientific documents of medical practice. It describes 48 surgical procedures performed in ancient Egypt. Other early documentation of ambulatory care includes Greek and Roman use of temples as places of healing in the first century AD. Same day surgery was continued by religious orders in the Middle Ages and hospitals that evolved from the Crusades. Church dominated hospitals were widespread in Europe during the 15th century and included outpatient as well as inpatient care (Schneck, 1984).

In spite of centuries of humans performing surgery on their fellow beings, American surgery has made the transition to same day surgery rather slowly with repeated attempts to re-popularize and extend its advantages. Until the 1900s, the practice of medicine was rudimentary due to a lack of medical technology. Physicians usually obtained their skills by serving short tenures at unsophisticated medical colleges. They often performed the majority of treatment in their offices or patients' homes (Lyford, 1989). Outpatient services became widely developed by the 1900s, and in 1909, Dr. James Nicoll of Royal Glasgow Hospital for Children conducted same day surgeries on approximately 8,000 pediatric patients. Dr Nicoll concluded that this approach was as satisfactory as inpatient surgery for a number of operative procedures (O'Neill & Templeton, 1990).

Same day surgery lay dormant for approximately 40 years thereafter, largely due to the lack of adequate anesthetic drugs. It was not until the 1950s that interest was again revived. The early 1960s brought increased growth due to the benefits of early ambulation of

post operative patients, an increased demand for inpatient beds by the more seriously ill, and the prospect of increased cost savings and convenience of both the physician and patient (Schneck, 1984).

The late 1960s also brought about site changes for outpatients. Prior to 1968, same day surgery was hospital based. Freestanding centers were opened as a consequence of physicians frustrated with the lack of hospital based accommodations (Brinton, 1988). Staunch resistance to freestanding facilities came from hospitals whose patient base was eroding. Hospital leadership realized they must rethink the delivery of ambulatory surgical services if they were to survive in this highly competitive health care environment.

The 1970s saw an explosion of growth in the health care industry. Surgeries increased with total operations in the United States rising from 15.8 million in 1971 to 26.2 million in 1983 (Easterbrook, 1987, p. 43). The cost of healthcare in the U.S. became enormous. In the late 1970s, U.S. health care expenditures increased at an average rate of 13 percent annually. In 1982, total U.S. health care spending exceeded 10 percent of the gross national product for the first time (Easterbrook, 1987, p. 44).

A solution to the spiraling health care costs was a prospective fixed fee system of reimbursement based on diagnostic-related groups (DRGs). This system was adopted in 1983 as the funding mechanism for Medicare. It quickly became popular, and other major third party payers also adopted this methodology of payment. Under DRGs, hospitals receive a fixed fee reflecting an average cost of treating the diagnosed condition of a patient. If the patient is more acutely ill than average and requires extra care, the hospital must pay any cost beyond the DRG allowance. However, if the patient consumes fewer resources than average, the hospital keeps any money left over.

Same day surgery programs are encouraged and supported by the logic of DRGs. They minimize hospitalization, thus keeping expenses below the fixed reimbursement level in order to recoup costs or make a profit. Additionally, same day surgery programs still have the potential to satisfy patients and surgeons, while maintaining or improving the quality of care.

Acceptance of Same Day Surgery

Within the past 30 years, several major developments have contributed to the acceptance of same day surgery by the medical community. First, the pharmaceutical industry has developed anesthetics that act rapidly, leaving the patient with minimal prolonged side effects, such as drowsiness and nausea (Burns & Ferber, 1984). Another major development contributing to the endorsement of same day surgery was the availability and use of short acting analgesics to treat pain and drugs to manage nausea and vomiting. These medicines have greatly decreased patient post-operative discomfort. Surgeons have learned that early ambulation leads to a reduction in recovery time. It appears that good perioperative teaching by both nurses and physicians has created a smoother post-operative recovery and reduced the length of inpatient stay (Burns & Ferber, 1984).

The concept of same day surgery was supported in the early 1960s when a same day surgery unit was opened at the University of California, Los Angeles, by Doctors David Cohen and John Dillon. Since they were at odds with established medical standards, the physicians were often questioned about the safety of the patient. Cohen and Dillon (1966) would reply stating,

safety of the patient is not a matter of inpatient versus outpatient. Safety is an attitude, and when good practice is followed in selection of patients by the surgeon,

with careful pre-anesthetic evaluation and careful anesthetic technique, there is no reason to expect more complications than under the circumstance of hospitalization (p. 1114).

Advantages of Same Day Surgery

Same day surgery is attractive to both the young and old alike, since the patient does not undergo the anxiety of being away from home several days. Children, who usually become frightened by an unfamiliar hospital setting, are comforted knowing that they will only be separated from their parents during the short operating room and recovery room phases of their procedure. The elderly who often become disoriented in unfamiliar hospital settings are relieved to rest and heal in the comforts of home (Lyford, 1989).

No group is more aware of the need to economize by providing services out of the hospital whenever feasible and appropriate than are surgeons. They are aware of the fact that all systems of the body return to normal more quickly postoperatively if the patient ambulates, and patients have a better mental attitude about their illness if they are in the familiar surroundings of their home. Postoperative pain and the need for medication to alleviate it are actually decreased (Davis, 1987).

Many surgeons have become frustrated with hospital red tape, delays in admissions of patients, increasingly large number of hospital personnel who want to participate in the care of patients (and participate in the decisions regarding care), and the progressively greater regulations placed on them by hospitals. These surgeons view same day surgery as a means by which they can deliver direct and appropriate care to patients more efficiently and effectively (Davis, 1987).

Barriers to Developing a Same Day Surgery Program

Although same day surgery continues to grow, a number of factors have inhibited its growth. One of the major factors has been opposition from older/traditional physicians to new approaches for delivering care. A small number of physicians are unwilling to consider changing their practice patterns and continue to admit patients to a hospital rather than use same day surgery. This resistance is often based on the fear of being sued. Another factor which has impeded the development of same day surgery is patient resistance stemming from past experience and insurance considerations. A small number of patients do not want same day surgery because they know of a friend or relative that was hospitalized for the same surgical procedure and they think they should also be hospitalized. Other patients feel that since they pay for their health care insurance, they are being cheated out of the care they deserve (Porter, 1987).

When it comes to offering SDS at a facility, one of the biggest issues relates to developing a list of outpatient surgeries that the facility routinely performs. Clinicians tend to caution against an absolute list of same day surgeries because a vast number of these surgeries may be better suited as inpatient surgeries under certain circumstances. There are too many variables involved to allow a strict and all inclusive list of surgeries to be performed in an outpatient setting.

Although SDS can save time and money, patients incur a greater responsibility for their recuperation. This responsibility occurs prior to surgery and continues throughout the recovery period. Although patients are waking up faster from surgery as a result of faster acting anesthetic agents, it is also important that patients not underestimate the recovery

period. Anesthetics may leave patients groggy for at least 24 hours after surgery and they will not be functioning at full effectiveness during that time (Richards, 2000).

Just because a patient goes home just a few hours after surgery does not mean that they are ready to resume normal activities. Patients must think about what they would be doing if they had stayed in the hospital following surgery. It is recommended that post SDS patients should not be cooking dinner, out shopping, or doing any other activity that is non-conducive to facilitating recovery. These patients should be in bed, resting, and have someone taking care of them. Although pre and post operative preparation will vary depending on the procedure, there are some things that everyone should do to prepare for SDS. Richards (2000) recommends the following:

- recruit someone to stay at least 24 hours after surgery with you, since the anesthetic will make you groggy, and you'll need someone to make sure that you get ample fluids and nourishment, take your medication on schedule, and help you get to the bathroom.
- Do a safety check around your house. Make sure that you have a clear path from your bed to the bathroom. Use a night-light or leave a light on to help you find your way at night.
- Stock the pantry. Although it's best to stay away from greasy or spicy foods, generally, you can eat whatever you can tolerate as long as it's not restricted. You should get plenty of juices, as fluids are necessary to flush the anesthetic from your body.
- If you have children, find someone who can care for them while you recuperate.

- Since it's recommended that you keep the surgery site above the level of your heart to reduce swelling, get enough pillows to help with elevation.

It is also suggested that if you are unable to walk around unassisted after surgery, you should practice using crutches beforehand because it's easier to learn to handle crutches when you aren't groggy and don't have an intravenous line in one of your hands.

Related Study

In her study to determine the feasibility of implementing same day surgery at Brook Army Medical Center (BAMC), located at San Antonio, TX, Lyford (1989) established seven objectives. These objectives were as follows: first, identify and develop a list of appropriate same-day surgical procedures that can be performed at BAMC; second, conduct an analysis to determine if implementing same-day surgery will be beneficial in reducing Champus costs; third, determine the financial implications of same-day surgery and its impact upon the present system of funding; fourth, determine the financial implications of same-day surgery under the forthcoming DOD Diagnostic Related Group (DRG)-based resource allocation system; fifth determine a same-day surgery demand forecast using previous workload data; sixth, determine the same-day surgery facility model that is most conducive to BAMC's current operating environment; and seventh, recommend a location for the physical layout of the same-day surgery areas at both Main Hospital and Beach Pavilion to include their corresponding internal designs.

Lyford's study revealed some significant findings that may be of interest to anyone considering establishing an ambulatory surgery program at a military hospital. In her study, she addresses the results as they correlate to her seven research objectives. However, one

finding from Lyford's study that may offer the greatest value for those interested same day surgery in a military setting is the finding from objective six.

Again, objective six was to *determine the same-day surgery facility model that is most conducive to BAMC's current operating environment*. Lyford found that due to the severe financial constraints imposed upon BAMC, the only logical facility model for same-day surgery at BAMC is an integrated hospital-based unit. The program could be established quickly without requiring large capital expenditures for new construction or remodeling. Lyford determined that only a few additional resources would be required, since the existing patient preparation areas, operating rooms, post-operative recovery areas/post-anesthesia care units (PACU), and visitor waiting areas were being used. Lyford reasoned that BAMC would incur a minimal financial risk since only a small expenditure would be required. If the same day surgery program failed, the usage of the associated assets could easily be converted for use in other areas.

Purpose

The purpose of this qualitative research project is to determine the need for an established same day surgery program by first understanding the variables that have inhibited the establishment of such a program at the 121st General Hospital. Next, the researcher will ascertain the feasibility of implementing a same day surgery program at the 121st GH. The first part of this objective will be to conduct a comparison of Fiscal Year 2004 121st GH inpatient surgeries with the 2004 list of same day surgeries established by the Centers for Medicare and Medicaid Services (CMS). The second part of this objective will be to develop an ad hoc data pull from the Composite Healthcare System (CHCS) to show the number of the 2004 inpatient coded surgeries that actually lasted less than 24 hours or 1,440 minutes.

This is measured in minutes in CHCS from the time the patient is admitted to the time the patient is discharged. If the number of inpatient surgeries that took less than 1,440 minutes is significant, then one might hypothesize that same day surgery is already occurring at the 121st and that this process is masked because due to outpatient surgeries being erroneously coded as inpatient surgeries. The third part of this objective will be to analyze the current surgical patient flow. Lastly, if SDS is a feasible choice for the 121st GH, the researcher will determine the SDS model most conducive to the hospital's current environment.

Methods and Procedures

In order to determine the feasibility of implementing same day surgery at the 121st General Hospital, analysis which parallels the aforementioned objectives will be conducted. The results of which will be discussed in later sections of this paper.

Identify the variables that inhibit the establishment of a same day surgery program at the 121st General Hospital

There are a several variables that the researcher considers to be inhibitors of same day surgery at the 121st GH. The 121st GH hospital is the only U.S. Army fixed facility on the Korean peninsular. Consequently, it receives surgical patients from every outlying Army installation on the Korean peninsula. As reported by the United States Forces Korea (USFK) personnel officer, of the 28,583 service men and women on the Korean peninsula, 26,514 of them are unaccompanied for at least a one year tour (See Table 3) (McCarthy, 2006). Thus, inpatient surgery has been the solution to housing these patients regardless if they were ambulatory or truly required an overnight stay. Many are stationed at remote installations several hours from the hospital, and most are not allowed to have personal vehicles and must rely on the bus system or train as their means of transportation. It is logical that these

surgical patients stay overnight at the facility instead of being released the same day of the surgery, to only go back to their place of residence where they will be alone, and may not have any assistance. The 121st GH staff is cognizant of these unusual circumstances germane to this duty assignment, and in the best interest of the patient is more willing to keep a patient longer than clinically necessary (Thornton, 2006b.)

Table 3

U.S. Military Stationed in South Korea by Service

Service	Active Duty	Unaccompanied Active Duty
Coast Guard	1	1
Marines	87	52
Navy	364	270
Air Force	8567	8110
Army	19564	18081
Total	28583	26514

Prior to 2003, the hospital provided a large room with three beds outside the Women and Infant Care Unit (WICU) for expectant mothers who lived several hours from the hospital. This housing setup in the 121st GH was appropriately called the “storks nest” and has since been moved to buildings outside of the hospital to continue to meet the needs of expectant mothers as well as other patients from distant locations (Lindsay, 2006a). This is another relevant example of the unique circumstances of providing quality care at the 121st even though the additional support provided to its patients is unorthodox, non-clinical, and likely incurs more cost for the hospital. Some would argue against SDS because its concept conflicts with the current practice of housing patients longer allowing more recovery time before departing the facility.

The 121st General Hospital’s dual mission of providing fixed facility care as well as providing care to soldiers in an austere field setting, provides a great deal of pressure and

strain on the staff. The 121st GH staff not only maintains the 61 bed MTF, but is also responsible for maintaining a 476 bed Field General Hospital. Consequently, the status quo of inpatient care for the majority of surgeries may have prevailed because it followed the proverbial “path of least resistance.” Imposing change in any organization can be challenging, especially when the staff of the organization has very limited time to embrace change as it is continuously performing two real-world missions.

Cultural beliefs influence one’s conduct and actions. The staff at the 121st is very diverse with the majority of civilians being Korean citizens who speak English as a second language. The American staff understand very little of the basics of the Korean culture. This can be attributed to the high military staff turnover as a result of one year tours being most common for soldiers stationed in Korea. The most prominent barrier resulting from cultural differences is the language barrier between Korean staff and other staff and patients at the 121st. One officer reported that in order to understand one of his workers, he has her email him because this individual writes English a lot better than she speaks (Onkst, 2006). Unfortunately, the Korean staff is only required to pass a written English proficiency test. The personnel system in Korea does not currently require potential staff to take and pass an English speaking proficiency test. Until this is a requirement for employment, there will continue to be a prominent language barrier with the Korean staff at the 121st GH.

In his book, *Organizational Behavior*, Robbins (2004) talks about how cross-cultural communication can create the potential for increased communication problems. First, there are barriers caused by semantics. Words mean different things to different people. This is especially true for people from different cultures. For example, there are several American words that don’t translate over to Korean words. Second, there are barriers caused by word

connotations. Simply, some words have different meanings in different languages.

Negotiations between American and Japanese are made more difficult because the Japanese word *hai* translates as “yes,” but its Japanese meaning is “yes, I’m listening,” rather than “yes, I agree.” Third, there are barriers caused by tone differences. To Americans, Koreans often sound like they are angry when they talk to each other, but that is the typical tone used between two Korean friends having a casual conversation. Lastly, there are barriers caused by differences among perceptions. People who speak different languages actually view the world in different ways. A better understanding of these cultural barriers and their implications by all 121st staff may help alleviate the communication gap and aid positive change not only in the surgical setting, but in many other areas at the 121st. This can be achieved by considering the concepts of high and low context cultures. A country like Korea is a high context culture. It relies heavily on nonverbal communication and subtle situational cues when communicating. What is not said is often more important than what is spoken. In contrast, Americans reflect their low context cultures by relying on words to convey meaning. Communication in high context cultures implies more trust by both parties. Oral agreements imply strong commitments in high context cultures. In low context cultures, oral agreements typically are not an acceptable business practice. Enforceable contracts tend to be in writing precisely worded, and highly legalistic (Robbins, 2004).

Determine if implementing same day surgery is a feasible endeavor

Today, the majority of MTFs have same day surgery programs based on accepted lists of surgeries that can be performed in an outpatient setting. One critical action in determining SDS feasibility was to determine if the 121st GH had previously performed an adequate

number and type of outpatient surgeries that were listed on the CMS's SDS list. Once this was verified, the researcher was able to continue with the study.

Data collection. The first step is to establish a baseline list of suitable operative procedures for same day surgery at the 121st. The literature on same day surgery provides a plethora of lists from various organizations itemizing their accepted same day surgical procedures. Among them, many would probably be suitable for use by the 121st. The list of same day surgical procedures established by the Centers for Medicare and Medicaid Services (CMS) appears to be the gold standard and is accepted by the American College of Surgeons. This list is updated yearly as new technology allows for additional same day surgical procedures.

Data relating to inpatient and outpatient surgeries were pulled from the Standard Inpatient Data Record (SIDR) and the Standard Ambulatory Data Record (SADR), both of which are located in the Military Health System (MHS) Data Mart, better known as M2. The Patient Administration Systems and Biostatistics Activity (PASBA) conducted three separate data pulls providing the required data for this study. Additionally, an ad hoc CHCS data pull was developed showing all 2004 inpatient surgeries that lasted less than 1,440 minutes or 24 hours. The CHCS data could not be pulled from the SIDR within M2 because CHCS does not send this specific data to the SIDR (Funk, 2006).

Study design. This study utilized a non-experimental research design using pre-recorded data to make descriptive analyses on variables collected on patients at the 121st General Hospital over a 12 month period. Some statistical inferences were made on a sample population of inpatient surgeries to discern any differences in total costs of inpatient surgeries

and same day surgeries. The non-experimental design has been suggested for this type of descriptive study, as it correlates to the researcher's intent for this project.

Subjects. The subjects of this research consist of 2,661 inpatients and 400 outpatients cared for at the 121st GH during FY 2004. The main focus of this data is to determine those patients who should have received their surgeries as outpatients at the 121st GH. The CMS list of same day surgeries was crossed checked against all 121st FY 2004 inpatient surgeries. All surgeries that qualified as appropriate for same day surgery, according to the list established by the CMS, were the sample used for hypothesis testing and cost analysis. A cost analysis was conducted to determine the difference in cost between inpatient surgery cost and same day surgery cost.

Surgical Patient Flow. The researcher had two meetings with the pre-operative nurse to discuss how all surgical patients generally flow through the hospital. A flow chart was developed and is part of the results section.

Identify the model and location of same day surgery which is most conducive to the 121st GH's current operating environment

To determine the SDS model and location that would be most conducive to the 121st GH's current operating environment, four same day surgery model types were reviewed.

1. Integrated: The model is interfaced into existing inpatient operating room and recovery areas.
2. Separated or Autonomous: The model consists of a distinct unit or facility connected to a hospital. Organizationally, it is part of the hospital's structure but has independent operating room recovery areas.

3. Satellite: The program is based in a separate facility, located off the hospital's campus. Administrative and ancillary services are shared with the hospital.
4. Freestanding: The model is based in a separate facility on or off the hospital's campus, but its management is distinct or autonomous from that of the hospital.

Each same day surgery model has advantages and disadvantages as outlined in Appendix A (Richards, 2000).

Validity and Reliability

As stated earlier, data for this study was pulled from the M2 Data Mart. M2 is the premier and most reliable data source for the MHS. It is the "catcher's mitt" receiving data from all of the major operational systems to include the CHCS, Expense Assignment System (EAS), Medical Expense and Performance Reporting System (MEPRS), and Health Care Service Record (HCSR)/Claims Data, and the Defense Eligibility and Enrollment Reporting System (DEERS). The CMS approved list of ambulatory surgeries is utilized by SDS centers and hospitals throughout the United States as a means of reimbursement and is widely accepted by insurance companies, billing departments, and Medicare/Medicaid. All of the M2 data was pulled by PASBA, the leader in data management and analysis for the Army Medical Department. The CHCS ad hoc was written by a Science Applications International Corporation (SAIC) CHCS system specialist contracted by the hospital.

The reliability of this analysis has been greatly enhanced compared to previous SDS studies due to the implementation of M2 and improvements in data quality across the military health system. Consequently, the data retrieval methodology appears reliable and should be reproducible for any military medical treatment facility. However, even with the reliability of M2 and

CHCS, close scrutiny in studies like this is crucial because data entry errors in the operational systems listed above are a common occurrence.

Results

Expected Findings

Some of the major findings that the researcher expected include the following:

- It is feasible for the 121st General Hospital to offer SDS at a lower cost by surgery type than if that same surgery was done in an inpatient setting.
- One of the four methods of SDS will improve and streamline the surgical process at the 121st General Hospital.
- There are a significant number of 2004 inpatient coded surgeries that lasted less than 24 hours
- The 121st General Hospital is improperly coding surgeries as inpatient when they should be coded them as outpatient surgeries.

Utility of Results

The results of this study will reveal the current surgical process at the 121st GH. This will provide a starting point for the hospital leadership to make improvements to the current process and/or initiate a formal same day surgery program. The results may also influence an initiative to more accurately code surgeries as inpatient or outpatient based on how long the surgical patient is at the hospital.

Findings

Identify the variables that have inhibited and continue to inhibit the establishment of a same day surgery program at the 121st General Hospital. Starting in 2008, several

Army units are consolidating to four locations on the Korean peninsula. The 121st GH will move to a new facility located at Camp Humphrey 80 miles south of Seoul. Camp Humphreys will have approximately 45,000 service men and women making up 73% of the total active duty population on the Korean peninsula (Allgood, 2006). Since the hospital will be centrally located with the majority of active duty and family member population, the need to keep surgical patients as inpatients after basic outpatient surgeries is expected to decrease dramatically.

With the building of a new hospital comes a prime opportunity to construct a same day surgery suite that can actually maintain a full SDS program based on workload data from previous years. It is difficult to know the intent for the newly constructed SDS suite at the current facility, but it appears that it was either not meant to accommodate a full SDS program, or it was built based on surgery workload data that was much lower than the workload currently experienced at the 121st GH.

If the 121st GH only had the mission of running the 61 bed hospital, imposing positive change would be less challenging with more time to focus solely on the fixed facility. Although unlikely, it is possible that the 121st GH relinquishes its field mission retaining the important mission of providing health care services within the walls of the current hospital in Seoul and at the new hospital at Camp Humphrey in the years to come. This is certainly a viable option that the Army Medical Department must consider as the soldiers are currently asked to do too much with two distinct missions.

To overcome the language barrier between the Korean staff and other staff and patients at the 121st GH, a more stringent English proficiency test is required, one that not only tests written skills, but also tests for minimum speaking proficiency. So many things

can go wrong in a hospital if staff and patients are unable to understand certain Korean staff members. It is not just a matter of principle, but a matter of safety for out patients.

Determine if implementing same day surgery is a feasible endeavor. There were 2,661 inpatients (See Appendix B) treated at the 121st GH during Fiscal Year 2004 based on the incidence of inpatient surgical procedures via the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) procedure codes 01.01-86.99. As stated earlier, the 400 outpatient surgeries of this study (See Table 2) are primarily non-surgical GI procedures making up the APU at the 121st.

A sample (n = 184) of the inpatient surgeries with at least 3 or more incidents per surgery type were used to compare and contrast with the CMS list of SDSs to establish the list of 646 inpatient surgeries that could have been performed as same day ambulatory surgeries at a lower cost (Appendix C). Appendix C identifies 39 of the 348 types of FY 2004 inpatient surgeries (11%) that the 121st GH treated its patients under as being appropriate for same day surgery. Appendix C also shows if all 646 surgeries were performed in a SDS setting, there would be a potential cost difference of \$1,663,628.31. With the new Performance Based Army Adjustment Model (PBAM), monthly Army MTF budget adjustments will occur based on changes in the number of providers available, provider efficiency, workload, coding, and use of clinical practice guidelines. So, when someone asks, “why does it matter if we code surgeries correctly or not when making a profit is not our goal?” The answer is the Army Medical Command is now tying our budget to our performance. If 121st GH fails to code correctly, it will likely lose money from its budget that will go to other MTFs performing at higher level. The importance of accurately coding has never been so important (Spencer, 2006).

Appendix D shows the 2004 inpatient surgeries that lasted less than 24 hours or 1,440 minutes. This number (1,051) makes up 28% of all 2004 inpatient surgeries. Of the 1,051 surgeries, over 50% were not only less than 24 hours, but the surgical patient was released the same day the surgery occurred. Yet, these surgeries were still coded as inpatient surgeries although they should have been coded as outpatient surgeries because they do not exceed 24 hours (Unified Biostatistical Utility, 2005). This data supports the notion that same day surgery is occurring in an unofficial capacity at the 121st General Hospital.

Identify the model and location of same day surgery which is most conducive to the 121st GH's current operating environment. Similar to Lyford's (1989) findings, analysis of the current surgical patient flow at the 121st GH (See Appendix E) revealed that the best same day surgery model to be incorporated would be a hospital-based integrated unit. This consists of a designated area within the hospital where the preoperative evaluation, preparation, post-recovery areas are shared with the inpatient surgeries. The hospital operating rooms can be used for both inpatient and same day surgery patients. Due to the physical and financial constraints of the 121st GH over a several year period, hospital-based integrated SDS has developed minus the correct coding of same day surgeries.

On 3 March 2006, the SDS PAT briefed the hospital commander recommending that only oral surgery and special procedures occur in the new SDS suite, with all other surgeries following the process shown in Appendix E. The recommendation was accepted by the Commander given the resources and environment. The Commander gave the directive to take a better look at the overall surgical process at the 121st GH with the intent to decrease the wait time for surgical patients and provide the best care possible. Additionally, he asked

the PAT to develop policies and staffing plans to ensure a smooth transition into the new suite over the next several months (Lindsay, 2006b).

Discussion

The researcher assessed the need for a same day surgery program at the 121st GH. This assessment revealed that a formal same day surgery program could easily be implemented at the 121st GH with accurate coding and a few subtle changes with the current process.

While this study shows that it is feasible to operate a formal same day surgery program at the 121st General Hospital, there are three areas that should be looked at more closely. These areas are the impending Joint Commission on Accreditation of Healthcare Organizations (JCAHO) survey of the hospital, pros and cons of SDS, and data quality at 121st GH.

Currently, the Department of Defense (DOD) requires all its hospitals to be accredited by JCAHO. Although the 121st GH is considered a “Field Hospital” and is transitioning to a Combat Support Hospital (CSH), it is not excluded from this JCAHO accreditation requirement. The hospital is currently preparing for a JCAHO survey to be conducted spring 2007. This survey will include the 121st GH, as well as the smaller health care facilities that fall under the command and control of the 18th MEDCOM. There will be inherent pressure on the hospitals key leaders to ensure that the hospital does well on this pending survey. This is a great example of the responsibilities the 121st GH has with both a field mission and the mission of a MTF.

There are many pros and cons to health care facilities doing same day surgery. As Pollock (1987) reports, some of the advantages of doing same-day surgery include:

- increased potential for reimbursement by third party payers
- a reduction in costs associate with 24 hour nursing staff
- reduced waiting times for surgeries
- decreased demands on the staff, due to a decrease in occupancy
- reduction in “hotel” facilities costs required for inpatients, where this includes meals, electricity, laundry service, etc.
- the shorter time spent by each SDS patient in the hospital allows more patients to be treated in the facility
- the hospital’s ALOS for patients is decreased as post-operative complications secondary to infections decrease
- ability to free up nursing staff personnel so that they can be shifted to support more critically ill patients
- patient satisfaction with recovering at home
- less interruption of the patients normal routine
- reduced anxiety to the patient relating to having surgery
- reduced incidental costs for patients

Some of the disadvantages of SDS that Pollock reported include:

- increased outpatient workload for staff, especially nursing staff
- potential for a decrease in quality of care
- resistance to revision if problems are discovered
- hidden costs and dissatisfiers for the patients

Since the start of this project, it has been evident to the researcher that the 121st GH and its higher command, the 18 MEDCOM have data quality and accuracy issues that must be addressed. Part of the problem is that the majority of the resource management staff works at the 18th MEDCOM level and consequently lacks the necessary focus on the hospital's data. Another contributing factor is many staff members are comfortable with the status quo of how we have tracked surgery workload over the past several years. The comment "well that's how it's always been done" is not a good reason to keep doing something. The best example of this is the tracking of surgical patients. Currently and for many past years, the 121st GH codes surgical patients as inpatient even though the majority of these patients are released the same day their surgery was performed. The Military Health System Coding Guidance (See Appendix F) states,

an ambulatory procedure visit (APV) in DODI 6025.8. is not to exceed 23 hours and 59 minutes, measured from the time the patient care begins in the MTF to the time the patient no longer requires medical supervision. Being "checked in" in CHCS is not the beginning of patient care. Frequently, care begins a significant amount of time after the nurse activates the encounter in CHCS. An APV patient who stays beyond 24 hours past actual patient care start time must be admitted to a hospital as an inpatient, if medically necessary. APV patients staying beyond 24 hours after start of care are not automatically admitted. As with any admission, there must be a written order from a provider to change an APV to an admission (Unified Biostatistical Utility, 2005).

This guidance by the Unified Biostatistical Utility (UBU) clearly defines the time limitations of outpatient or same day surgeries. For the 121st GH, it is not only a matter of

following the regulations set forth by the DOD and the Army Medical Department, we must also consider our patients who pay out of pocket for their surgeries and ensure they are not being charged the much higher inpatient surgery cost when they should only be charged the lower outpatient surgery cost. This is an ethical issue that to the researcher's knowledge has not previously been addressed by the current leadership.

Recommendations

As a result of the analysis, the following recommendations are made:

1. The same day surgery process action team evaluates the current flow of surgical patients determining if additional staffing and space are truly needed. If it is determined that the surgical process is short staff and/or space, the PAT must consider ways to provide additional staffing and space for the surgical process. One recommendation is to analyze the workload of special procedures and oral surgery – the two services using the SDS suite. Since preoperative assessment for all surgical cases also occurs at the SDS suite, support staff from special procedures and oral surgery may be able to augment the preoperative staff during the peak times of the day. During slow periods, space from special procedures and oral surgery may also be used by the preoperative staff to ease bottleneck situations. There may also be less obvious factors causing the bottleneck like scheduling patterns that can easily be changed to improve flow.
2. Conduct an audit of the current coding process at the 121st General Hospital. The intent is to identify and correct improper coding practices, thereby allowing the proper coding of outpatient surgeries.
3. Consider consolidating all surgical clinics (See Table 1) into one multi-specialty surgical department with one NCOIC and Chief, and a head nurse. Currently, every surgical service has

a NCOIC and one or more nurses. This is a misuse of support staff that could be better used supporting the inpatient and outpatient surgical processes and other areas within the hospital.

4. Keys leaders must emphasize the importance of accurately forecasting outpatient surgery workload base on the total number of beneficiaries seeking care at the new hospital set to be built at Camp Humphreys. The preliminary space requirements for each area within the hospital are currently being collected. It is paramount that adequate space is projected to handle a fully operational same day surgery suite within the new hospital.

Conclusion

In conclusion, this GMP shows that it is feasible for the 121st to implement a formal same day surgery program at the 121st General Hospital. Appendix C shows that there is a significant decrease in cost if each surgery is performed and coded as an outpatient surgery. This however is only one of the many costs associated with surgery. A future study could look at cost differences between inpatient and outpatient surgeries in the areas of staffing, housekeeping, medical supplies, and linen.

The critical elements of this project are the current surgical patient flow and incorrectly coding outpatient surgeries as inpatient. The subtle changes to improve the surgical patient flow relate to staffing and space. The one registered nurse (RN) working in the pre-operative service stated that an additional RN, a front desk clerk, and another interview room would decrease the bottleneck occurring during the pre-operative portion of the process (Thornton, 2006a). Then, if all outpatient surgeries could be coded as such, the 121st GH would have a SDS program. The major limitation continues to be the physical restraints of the hospital. There is not a good location for an all inclusive SDS suite within the walls of the current

facility. Consequently, patients must go to many areas within the hospital during the stages of the surgical process. This current flow is working, it just is not optimal.

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Key Terms

Accreditation: Acknowledgment by an official, independent review agency (e.g., JCAHO; NCQA) that the institution or individual meets some predetermined standard of practice; required for third-party reimbursement, training of professionals, etc.

Ambulatory facility: Any facility in which you have surgery as an outpatient is an ambulatory facility.

Ambulatory surgery/Same-day surgery: Surgery performed whereby the patient arrives and leaves the facility where the surgery is performed on the same day of the operation; same-day surgery is operationally defined within this paper as scheduled surgical procedures provided to patients who do not remain in the hospital overnight.

Anesthesia: General or localized insensibility, induced by drugs or other intervention and used in surgery or other painful procedures.

Civilian Health and Medical Program of the Uniformed Services (CHAMPUS):

Currently known as TRICARE Standard – One of the Department of Defense Health Program's three benefit options. No active enrollment is required. Active duty members are not eligible for this option. If family members receive care in the civilian sector without authorization from a provider at the military treatment facility, their care is covered under TRICARE Standard. It offers the larger choice of providers; however, it also incurs the highest costs. Each fiscal year, an annual deductible must be fulfilled before the government begins cost sharing 80% of the active duty family member's covered care. The sponsor's pay grade determines the amount of the deductible. After the deductible is fulfilled, the patient pays 20% of the remaining allowable charge as a co-payment. Again, the cost is higher, but the choice of providers is greater.

Composite Health Care System (CHCS): A computer data base containing privileged medical and personal data on a soldier undergoing medical review.

Continental United States (CONUS): Refers to the 48 mainland states of the U.S.A.; all states of the U.S.A., except Alaska and Hawaii.

Cost: A monetary measure of the amount of resources used for some purpose.

Diagnostic Related Groups (DRGs): Classification scheme that categorizes patients who are medically related with respect to diagnoses, presence of a surgical procedure, age, sex, and presence or absence of significant comorbidities or complications and who are statistically similar in their length of stay; form of prospective reimbursement system used by HCFA for Medicare recipients, as well as some states and private health plans for contracting purposes since October 1, 1983.

Factor: One of the elements contributing to a particular result or situation.

Fiscal Year: Any yearly period established for accounting purposes; traditionally, this period has been from 1 October of a given year through 30 September of the following year.

General anesthesia: An anesthesia that will allow you to sleep through the entire operation.

Inpatient: A patient who is admitted to a medical facility with the intent of staying at least for

Medical Treatment Facility (MTF): Refers to the military medical health care community and its regent military medical activities and communities.

Opportunity cost: The highest-valued, next-best alternative that must be sacrificed to attain something or to satisfy a want.

Outside the Continental United States (OCONUS): Duty assignments based outside the forty-eight mainland states of the U.S.

Pay patients: The category of patients authorized medical care at an MTF, but are required to pay for the care provided. Pay patients pertaining to the 121st General Hospital include all federal employees (non-military), United States Embassy personnel, invited contractors, and technical representatives. Charges for services rendered to pay patients are calculated in accordance with guidelines published in Section 1095 of title 10, United States Code (see Appendix for determination of charges to be paid).

Population: A well-defined collection of persons, objects or events.

Process Action Team (PAT): A group of subject matter experts or educated personnel who pool resource materials together to achieve certain goals, normally to establish or improve upon a process.

Quality: Distinguishing characteristics that determine the value, rank, or degree of excellence or expectation.

Reliability: Precision, efficiency, measuring the variable right. Measuring if the hypothesis can be tested under similar circumstances with the same instrument time and time again.

Return to duty (RTD): A personnel accountability status used to tracked/report a soldier who has been treated at an MTF (whether or not medical intervention was needed), then cleared to return to his/her unit (oftentimes with limitations annotated by a physical abilities profile).

Same-day surgery: See Ambulatory Surgery/Same-day Surgery (#3 above).

Sample: A subset of a population.

Statistical Package for the Social Sciences (SPSS) 7.5: Statistical software package used in computing complex statistical equations, Version 7.5.

Table of Distribution and Allowances (TDA): Resource allocations normally applied to fixed facilities (non-deployable military organizations).

Table of Organization and Equipment (TO&E): Resource allocations normally applied to deployable military organizations.

Total Quality Management (TQM): Management system fostering continuously improving performance at every level of every function by focusing on maximization of customer satisfaction.

Validity: Accuracy, effectiveness, measuring the right variable.

Variable: A characteristic of interest – one that can be expressed as a number – which is possessed by each item under study. The value of this characteristic is likely to change or vary from one item in the data set to the next.

Appendix A
Advantages and Disadvantages of Same Day Surgery Models

Model	Advantages	Disadvantages
Integrated	Shared space, equipment, and supplies with inpatient program	SDS program has low priority compared with inpatient program
	Patient selection liberal since suites contiguous with inpatient suites	Integration of "well" patients with acutely ill
	Minimal construction	Staff less experienced to meet outpatient health care needs
	Physician can work easily without going to another area	
	Better OR utilization if inpatient procedures are inadequate	
Separated or Autonomous	Separate, dedicated space for outpatients	Increased cost associated with construction
	Adjacent to hospital in case of emergency	Duplication of supplies and equipment
	Dedicated Staff	
	Focus on outpatient health care needs	
Satellite	Separate, dedicated space	Increased cost associated with construction and cost of equipment
	Dedicated staff	Duplication of supplies and equipment
	Focus on outpatient health care needs	
Free Standing	Free from hospital associated "red tape"	High construction costs
	Separate, dedicated space	Less flexible patient selection criteria
	Dedicated staff	Additional staff requirements
	Minimal delays in scheduling	

Appendix B
Incidence of Inpatient Surgical Procedures - FY 2004
Example of Data Pulled for Analysis

PROC	INPATIENT SURGICAL PROCEDURES	INCIDENCE
640	CIRCUMCISION	145
7569	REPAIR OF OTHER CURRENT OBSTETRIC LACERATION	137
741	LOW CERVICAL CESAREAN SECTION	91
7532	FETAL EKG (SCALP)	65
806	EXCISION OF SEMILUNAR CARTILAGE OF KNEE	62
736	EPISIOTOMY	61
7359	OTHER MANUALLY ASSISTED DELIVERY	52
8145	OTHER REPAIR OF THE CRUCIATE LIGAMENTS	49
8521	LOCAL EXCISION OF LESION OF BREAST	47
7751	BUNIONECTOMY,SOFT TISSUE CORRECTION,OSTEOTOMY,1ST METATARSAL	44
8026	ARTHROSCOPY OF KNEE	39
863	OTH EXCISION,DESTRUCTN,LESION,TISSUE,SKIN,SUBCUTANEOUS TISS	37
6909	OTHER DILATION AND CURETTAGE OF UTERUS	35
5304	UNILATERL REPAIR,INDIRECT INGUINAL HERNIA W GRAFT,PROSTHESIS	34
2319	OTHER SURGICAL EXTRACTION OF TOOTH	33
6732	DESTRUCTION OF LESION OF CERVIX BY CAUTERIZATION	33
8183	OTHER REPAIR OF SHOULDER	33
4701	LAPAROSCOPIC APPENDECTOMY (EFFECTIVE OCTOBER 1996)	29
8051	EXCISION OF INTERVERTEBRAL DISC (1/87)	29
282	TONSILLECTOMY WITHOUT ADENOIDECTOMY	27
4709	OTHER APPENDECTOMY (EFFECTIVE OCTOBER 1996)	26
4946	EXCISION OF HEMORRHOIDS	26
8147	OTHER REPAIR OF KNEE	26
5123	LAPAROSCOPIC CHOLECYSTECTOMY (1/92)	24
8221	EXCISION OF LESION OF TENDON SHEATH OF HAND	23
8628	NONEXCISIONAL DEBRIDEMENT OF WOUND, INFECTION, OR BURN(1/89)	22
684	TOTAL ABDOMINAL HYSTERECTOMY	21
7937	OPEN REDUCTION, FX, TARSALS, METATARSALS W INTERNAL FIXATION	21
8604	OTHER INCISION WITH DRAINAGE OF SKIN AND SUBCUTANEOUS TISSUE	21
0331	SPINAL TAP	20
2349	OTHER DENTAL RESTORATION	20
5303	UNILATERAL REPAIR, DIRECT INGUINAL HERNIA W GRAFT,PROSTHESIS	20
6952	ASPIRATION CURETTAGE FOLLOWING DELIVERY OR ABORTION	20
7781	OTHER PARTIAL OSTEOTOMY OF SCAPULA, CLAVICLE, AND THORAX	18
7934	OPEN REDUCTION, FRACTURE, PHALANGES,HAND W INTERNAL FIXATION	18
2184	REVISION RHINOPLASTY	17
5349	OTHER UMBILICAL HERNIORRHAPHY	17
7936	OPEN REDUCTION,FRACTURE,TIBIA AND FIBULA W INTERNAL FIXATION	17
7933	OPEN REDUCTION, FX, CARPALS, METACARPALS W INTERNAL FIXATION	16
8621	EXCISION OF PILONIDAL CYST OR SINUS	16
5305	UNILATERAL REPAIR, INGUINAL HERNIA W GRAFT, PROSTHESIS NOS	15
7309	OTHER ARTIFICIAL RUPTURE OF MEMBRANES	15
3859	LIGATION AND STRIPPING OF LOWER LIMB VARICOSE VEINS	14
4516	ESOPHAGOGASTRODUODENOSCOPY (EGD) WITH CLOSED BIOPSY (1/89)	14

6373	VASECTOMY	14
8364	OTHER SUTURE OF TENDON	14
280	INCISION AND DRAINAGE OF TONSIL AND PERITONSILLAR STRUCTURES	13
7932	OPEN REDUCTION, FRACTURE, RADIUS AND ULNA W INTERNAL FIXATION	13
8182	REPAIR OF RECURRENT DISLOCATION OF SHOULDER	12
8388	OTHER PLASTIC OPERATIONS ON TENDON	12
8659	CLOSURE OF SKIN AND SUBCUTANEOUS TISSUE, OTH SITES(EFF OCT00)	12
2001	MYRINGOTOMY WITH INSERTION OF TUBE	11
2169	OTHER TURBINECTOMY	11
2769	OTHER PLASTIC REPAIR OF PALATE	11
7768	LOCAL EXCISION OF LESION OR TISSUE OF TARSALS AND METATARSAL	11
0407	OTHER EXCISION OR AVULSION OF CRANIAL AND PERIPHERAL NERVES	10
283	TONSILLECTOMY WITH ADENOIDECTOMY	10
5302	UNILATERAL REPAIR OF INDIRECT INGUINAL HERNIA	10
7271	VACUUM EXTRACTION WITH EPISIOTOMY	10
7756	REPAIR OF HAMMER TOE	10
294	PLASTIC OPERATION ON PHARYNX	9
3404	INSERTION OF INTERCOSTAL CATHETER FOR DRAINAGE	9
3899	OTHER PUNCTURE OF VEIN	9
4466	OTH PROCEDURES FOR ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE	9
720	LOW FORCEPS OPERATION	9
8086	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OF KNEE JOINT	9
8149	OTHER REPAIR OF ANKLE	9
8532	BILATERAL REDUCTION MAMMOPLASTY	9
0443	RELEASE OF CARPAL TUNNEL	8
2341	APPLICATION OF CROWN	8
4011	BIOPSY OF LYMPHATIC STRUCTURE	8
4513	OTHER ENDOSCOPY OF SMALL INTESTINE	8
5300	UNILATERAL REPAIR OF INGUINAL HERNIA, NOT OTHERWISE SPECIFIED	8
5359	REPAIR OF OTHER HERNIA OF ANTERIOR ABDOMINAL WALL	8
540	INCISION OF ABDOMINAL WALL	8
5459	OTHER LYSIS OF PERITONEAL ADHESIONS (EFFECTIVE OCTOBER 1996)	8
6639	OTHER BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES	8
7662	OPEN OSTEOPLASTY (OSTEOTOMY) OF MANDIBULAR RAMUS	8
7759	OTHER BUNIONECTOMY	8
7868	REMOVAL OF IMPLANTED DEVICES FROM TARSALS AND METATARSALS	8
8081	OTHER LOCAL EXCISION, DESTRUCTION OF LESION OF SHOULDER JOINT	8
0449	OTH PERIPHERAL NERVE, GANGLION DECOMPRESSN, LYSIS OF ADHESIONS	7
2188	OTHER SEPTOPLASTY	7
2219	OTHER DIAGNOSTIC PROCEDURES ON NASAL SINUSES	7
5341	REPAIR OF UMBILICAL HERNIA WITH PROSTHESIS	7
5421	LAPAROSCOPY	7
7668	AUGMENTATION GENIOPLASTY	7
7758	OTHER EXCISION, FUSION, AND REPAIR OF TOES	7
7804	BONE GRAFT OF CARPALS AND METACARPALS	7
7867	REMOVAL OF IMPLANTED DEVICES FROM TIBIA AND FIBULA	7
7869	REMOVAL OF IMPLANTED DEVICES FROM OTHER BONE	7
8363	ROTATOR CUFF REPAIR	7
8684	RELAXATION OF SCAR OR WEB CONTRACTURE OF SKIN	7
201	REMOVAL OF TYMPANOSTOMY TUBE	6

Appendix C
Cost of FY 2004 Inpatient Surgeries at the 121st General Hospital Compared to the Cost of Same
Surgeries in a Same Day Surgery Setting

Short Descriptor	Surgical Dispositions	Inpatient Cost Per Surgical Disposition	Total Inpatient Surgical Cost	SDS Cost Per Procedure	SDS Total Cost
Circumcision	143	\$ 2,075.61	\$ 296,812.23	\$ 862.44	\$ 123,328.21
Excision, breast lesion	46	\$ 3,830.88	\$ 176,220.48	\$ 2,308.25	\$ 106,179.29
Repair of knee ligament	43	\$ 5,984.38	\$ 257,328.34	\$ 2,059.34	\$ 88,551.64
Repair of knee cartilage	42	\$ 4,539.61	\$ 190,663.62	\$ 582.14	\$ 24,449.78
Excision of foot lesion	30	\$ 4,176.59	\$ 125,297.70	\$ 833.29	\$ 24,998.64
Repair shoulder capsule	30	\$ 4,186.42	\$ 125,592.60	\$ 458.91	\$ 13,767.29
Hemorrhoidectomy	25	\$ 3,515.85	\$ 87,896.25	\$ 1,761.81	\$ 44,045.22
Excise wrist tendon sheath	23	\$ 2,973.00	\$ 68,379.00	\$ 2,620.54	\$ 60,272.40
Remove tonsils and adenoids	22	\$ 3,675.38	\$ 80,858.36	\$ 990.93	\$ 21,800.49
Repair of metatarsals	21	\$ 5,785.74	\$ 121,500.54	\$ 2,620.49	\$ 55,030.34
Hernia repair w/mesh	19	\$ 3,859.97	\$ 73,339.43	\$ 1,252.94	\$ 23,805.79
Repair hand joint	18	\$ 3,988.41	\$ 71,791.38	\$ 2,073.03	\$ 37,314.60
Repair umbilical lesion	16	\$ 4,525.56	\$ 72,408.96	\$ 1,502.98	\$ 24,047.62
Repair finger tendon	15	\$ 3,696.00	\$ 55,440.00	\$ 2,080.82	\$ 31,212.23
Esophagus endoscopy, biopsy	14	\$ 7,430.68	\$ 104,029.52	\$ 958.26	\$ 13,415.61
Debride tissue/muscle	13	\$ 7,265.33	\$ 94,449.29	\$ 404.55	\$ 5,259.19
Shoulder joint surgery	12	\$ 3,368.52	\$ 40,422.24	\$ 1,178.48	\$ 14,141.76
Spinal fluid tap, diagnostic	12	\$ 5,901.30	\$ 70,815.60	\$ 524.77	\$ 6,297.29
Excision of foot lesion	10	\$ 4,471.63	\$ 44,716.30	\$ 2,058.95	\$ 20,589.49
Repair of ankle ligament	8	\$ 3,897.95	\$ 31,183.60	\$ 2,582.04	\$ 20,656.33
Biopsy/removal, lymph nodes	7	\$ 4,579.14	\$ 32,053.98	\$ 1,557.11	\$ 10,899.75
Carpal tunnel surgery	7	\$ 3,277.23	\$ 22,940.61	\$ 2,238.20	\$ 15,667.38
Laparoscopy, biopsy	7	\$ 5,231.89	\$ 36,623.23	\$ 2,432.49	\$ 17,027.44
Removal of foot lesion	7	\$ 5,364.83	\$ 37,553.81	\$ 1,989.41	\$ 13,925.90
Removal of shoulder lesion	7	\$ 4,155.80	\$ 29,090.60	\$ 679.08	\$ 4,753.58
Removal of knee cyst	6	\$ 3,830.20	\$ 22,981.20	\$ 1,229.09	\$ 7,374.53
Repairing hernia, sliding	6	\$ 3,968.40	\$ 23,810.40	\$ 1,334.94	\$ 8,009.62
Repair of hammertoe	6	\$ 4,763.79	\$ 28,582.74	\$ 2,223.99	\$ 13,343.96
Orchiectomy, partial	5	\$ 4,548.06	\$ 22,740.30	\$ 1,468.25	\$ 7,341.23
Bronchoscopy & remove lesion	3	\$ 9,614.28	\$ 28,842.84	\$ 1,942.15	\$ 5,826.45
Colonoscopy and biopsy	3	\$ 3,308.26	\$ 9,924.78	\$ 1,142.33	\$ 3,427.00
Incision of metatarsal	3	\$ 5,890.59	\$ 17,671.77	\$ 2,214.88	\$ 6,644.63
Removal of eye lesion	3	\$ 3,161.85	\$ 9,485.55	\$ 1,211.59	\$ 3,634.77
Remove foreign body	3	\$ 1,232.27	\$ 3,696.81	\$ 647.98	\$ 1,943.94
Remove thyroid lesion	3	\$ 5,996.17	\$ 17,988.51	\$ 1,812.89	\$ 5,438.66
Remove wrist/forearm lesion	3	\$ 3,193.21	\$ 9,579.63	\$ 1,304.64	\$ 3,913.92

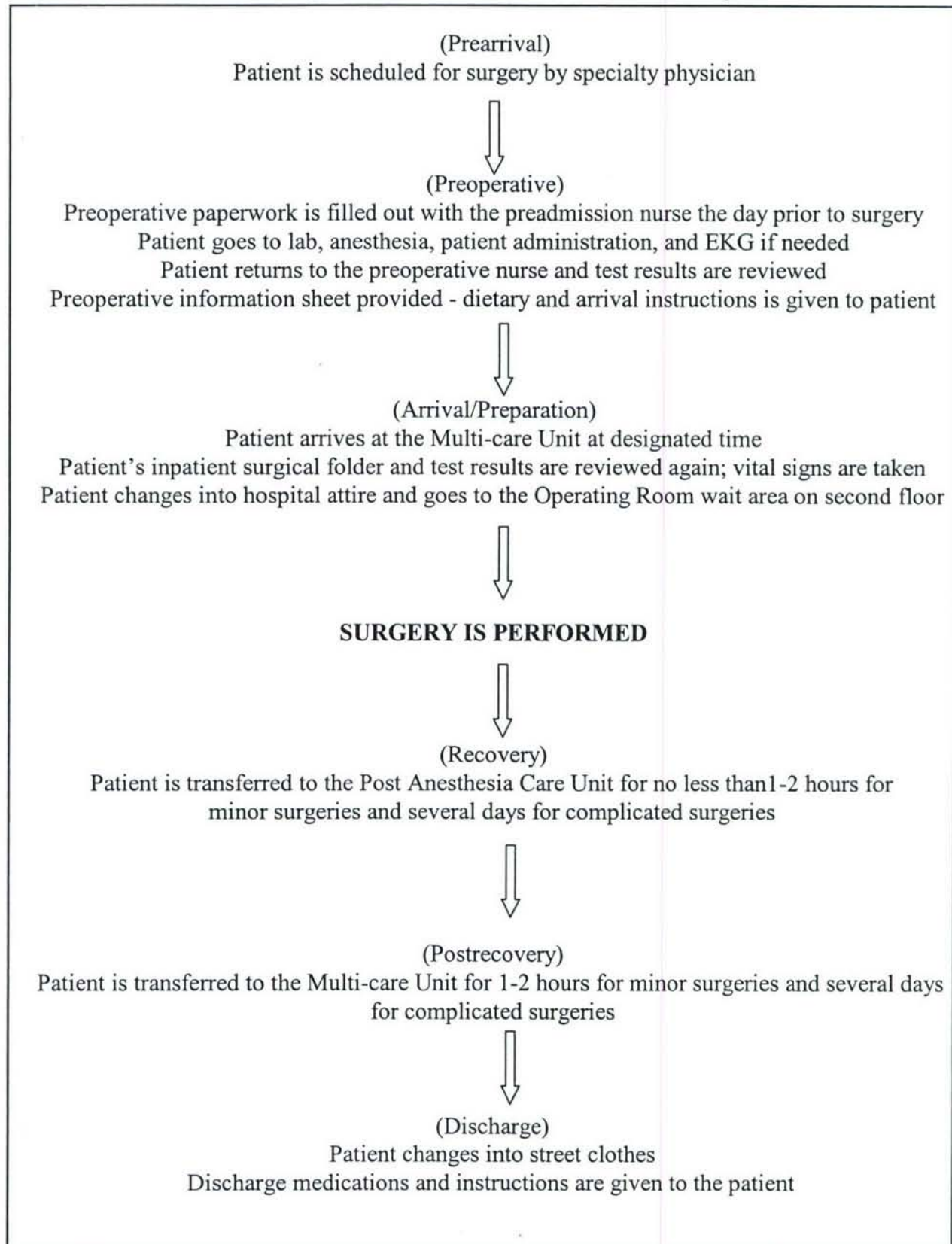
Arthroscop rotator cuff repr	2	\$ 3,689.10	\$ 7,378.20	\$ 2,295.55	\$ 4,591.09
Remove vagina lesion	2	\$ 3,738.86	\$ 7,477.72	\$ 1,462.89	\$ 2,925.79
Removal of adenoids	1	\$ 3,076.84	\$ 3,076.84	\$ 1,163.84	\$ 1,163.84
Total:	646	Total:	\$2,560,644.96	Total:	\$ 897,016.65
			Cost Difference	\$1,663,628.31	

Appendix D
FY 2004 Inpatient Surgeries Pulled from CHCS
Example of the Data Pulled for Analysis

Diagnosis	Ward	Admit	Disp	Minutes
(BRIEF DEPRESSIVE REACT)	MAS PSYCHIATRIC WAR	4-Jan-04	5-Jan-04	968
(FLU W RESP MANIFEST NEC)	MULTI-CARE UNIT	4-Jan-04	5-Jan-04	1198
ENIGN NEOPLASM BREAST)	MULTI-CARE UNIT	5-Jan-04	5-Jan-04	1011
(DYSPLASIA OF CERVIX)	MULTI-CARE UNIT	5-Jan-04	6-Jan-04	1000
(FLU W RESP MANIFEST NEC)	MULTI-CARE UNIT	5-Jan-04	6-Jan-04	1195
(BRIEF DEPRESSIVE REACT)	PSYCHIATRIC WAR	5-Jan-04	6-Jan-04	1277
(STERILIZATION)	MULTI-CARE UNIT	5-Jan-04	6-Jan-04	1377
(TORSION OF TESTIS)	01 MULTI-CARE UNIT	6-Jan-04	7-Jan-04	1222
(OTHER HAMMER TOE)	30 MULTI-CARE UNIT	7-Jan-04	7-Jan-04	219
(POIS-AROM ANALGESICS NEC)	B PSYCHIATRIC WAR	7-Jan-04	7-Jan-04	847
(2ND DEG BURN FOREARM)	MULTI-CARE UNIT	7-Jan-04	7-Jan-04	1167
(AFFECTIVE PSYCHOSIS NOS)	PSYCHIATRIC WAR	7-Jan-04	8-Jan-04	1362
(OTH CURR COND-ANTEPARTUM)	WICU	7-Jan-04	8-Jan-04	1409
(DYSPLASIA OF CERVIX)	T B WICU	8-Jan-04	8-Jan-04	120
(CHALAZION)	MULTI-CARE UNIT	8-Jan-04	8-Jan-04	912
(CONCUSSION W COMA NOS)	01 MULTI-CARE UNIT	8-Jan-04	8-Jan-04	927
(SINGL HOSP BIRTH, WO C-SECT)	NEWBORN NURSERY	8-Jan-04	9-Jan-04	1173
(POST TERM PREG-DEL)	WICU	8-Jan-04	9-Jan-04	1344
(PERFORAT TYMPAN MEMB NOS)	MULTI-CARE UNIT	9-Jan-04	9-Jan-04	789
(CHEST PAIN NEC)	MICU	9-Jan-04	9-Jan-04	836
(TOOTH POSITION ANOMALY)	N MULTI-CARE UNIT	9-Jan-04	9-Jan-04	934
(TOOTH POSITION ANOMALY)	MULTI-CARE UNIT	9-Jan-04	9-Jan-04	940
(MI,UNSPEC SITE,INIT EPISODE)	BR MICU	11-Jan-04	12-Jan-04	874
(LUMB/LUMBOSAC DISC DEGEN)	OK MICU	11-Jan-04	12-Jan-04	1135
ENIGN NEOPLASM BREAST)	1 C MULTI-CARE UNIT	12-Jan-04	12-Jan-04	820
(OTITIS MEDIA NOS)	MULTI-CARE UNIT	12-Jan-04	12-Jan-04	1048
(FIBROSCLEROSIS OF BREAST)	BT MULTI-CARE UNIT	12-Jan-04	12-Jan-04	1097
(SOFT TISSUE DIS NEC/NOS)	1 A MICU	12-Jan-04	13-Jan-04	781
(OTH FORMS OF MIGRAINE WO INTRA)	MICU	12-Jan-04	13-Jan-04	962
RONCHITIS NOS)	MULTI-CARE UNIT	12-Jan-04	13-Jan-04	1436
(EXCESSIVE MENSTRUATION)	E B WICU	13-Jan-04	13-Jan-04	812
(EXCESSIVE MENSTRUATION)	WICU	13-Jan-04	13-Jan-04	1021
(VENTRAL HERNIA, OTHER)	MULTI-CARE UNIT	14-Jan-04	14-Jan-04	1087
ISSED ABORTION)	A WICU	14-Jan-04	14-Jan-04	1132
(DEPRESS PSYCHOSIS-UNSPEC)	PSYCHIATRIC WAR	14-Jan-04	15-Jan-04	976
(BRIEF DEPRESSIVE REACT)	2 H PSYCHIATRIC WAR	14-Jan-04	15-Jan-04	1083
(ABRASION HEAD)	MICU	15-Jan-04	15-Jan-04	667
(CONTRAC PELV NOS-ANTEPAR)	WICU	15-Jan-04	16-Jan-04	521
(ALCOHOL ABUSE-UNSPEC)	1 C PSYCHIATRIC WAR	15-Jan-04	16-Jan-04	1316
(VARIANTS OF MIGRAINE WO INTRA)	MULTI-CARE UNIT	16-Jan-04	16-Jan-04	663
(ABRASION HEAD)	MICU	16-Jan-04	16-Jan-04	1238
(SPRAIN OF NECK)	M S MICU	16-Jan-04	17-Jan-04	1031
(PILONIDAL CYST W/O ABSC)	MULTI-CARE UNIT	20-Jan-04	20-Jan-04	950

(KELOID SCAR)	MULTI-CARE UNIT	20-Jan-04	20-Jan-04	963
(POLYP OF CORPUS UTERI)	WICU	20-Jan-04	20-Jan-04	1260
(CHEST PAIN NEC)	MICU	20-Jan-04	21-Jan-04	1239
(BRIEF DEPRESSIVE REACT)	. B PSYCHIATRIC WAR	20-Jan-04	21-Jan-04	1433
(POSTMENOPAUSAL BLEEDING)	WICU	21-Jan-04	21-Jan-04	732
(LOC OSTEOARTH NOS-L/LEG)	MULTI-CARE UNIT	21-Jan-04	21-Jan-04	1049
(CA IN SITU BREAST)	MULTI-CARE UNIT	21-Jan-04	21-Jan-04	1168
(PERIAPICAL ABSCESS)	F MICU	21-Jan-04	22-Jan-04	898
(ACUTE APPENDICITIS NOS)	MULTI-CARE UNIT	22-Jan-04	23-Jan-04	1111
(DYSPLASIA OF CERVIX)	NAN WICU	23-Jan-04	23-Jan-04	561
(MALIG NEO PANCREAS NOS)	MICU	23-Jan-04	24-Jan-04	1401
RONCHITIS NOS)	FA MULTI-CARE UNIT	24-Jan-04	25-Jan-04	884
(UMBILICAL HERNIA)	IG MULTI-CARE UNIT	26-Jan-04	26-Jan-04	828
(UNILAT INGUINAL HERNIA)	D MULTI-CARE UNIT	26-Jan-04	26-Jan-04	1304
(CHEST PAIN NEC)	MICU	26-Jan-04	27-Jan-04	1245
ISSED ABORTION)	WICU	27-Jan-04	27-Jan-04	639
(ENLARGEMENT LYMPH NODES)	ARM MULTI-CARE UNIT	27-Jan-04	27-Jan-04	940
(OTHER MONONEURITIS LOWER LIMB)	O A MULTI-CARE UNIT	27-Jan-04	27-Jan-04	979
(ENLARGEMENT LYMPH NODES)	01 MULTI-CARE UNIT	27-Jan-04	27-Jan-04	1247
(SPON ABORT UNCOMPL-COMP)	WICU	27-Jan-04	28-Jan-04	776
(NONINF GASTROENTERIT NEC)	MULTI-CARE UNIT	27-Jan-04	28-Jan-04	1101
(CHEST PAIN NEC)	MICU	27-Jan-04	28-Jan-04	1328
(CHONDROMALACIA)	MULTI-CARE UNIT	28-Jan-04	28-Jan-04	888
(CHEST PAIN NEC)	MICU	28-Jan-04	28-Jan-04	1011
(LOC OSTEOARTH NOS-L/LEG)	D B MULTI-CARE UNIT	28-Jan-04	28-Jan-04	1080
(THROMBOPHLEBITIS LEG NOS)	B MULTI-CARE UNIT	29-Jan-04	29-Jan-04	839
(CONCUSSION W COMA NOS)	1 C MULTI-CARE UNIT	29-Jan-04	30-Jan-04	1246
(TOOTH POSITION ANOMALY)	MULTI-CARE UNIT	30-Jan-04	30-Jan-04	836
(TOOTH POSITION ANOMALY)	MULTI-CARE UNIT	30-Jan-04	30-Jan-04	846
(TOOTH POSITION ANOMALY)	MULTI-CARE UNIT	30-Jan-04	30-Jan-04	1030
(CHRONIC SINUSITIS NOS)	C C MULTI-CARE UNIT	30-Jan-04	30-Jan-04	1047
(CONCUSS W LOSS CONSC 30 MIN/<)	T M MULTI-CARE UNIT	30-Jan-04	31-Jan-04	1335
(OTHER MONONEURITIS LOWER LIMB)	MULTI-CARE UNIT	2-Feb-04	2-Feb-04	1171
(FIBROSCLEROSIS OF BREAST)	MULTI-CARE UNIT	2-Feb-04	2-Feb-04	1181
(NONINFECT VAG LEUKORRHEA)	MULTI-CARE UNIT	3-Feb-04	3-Feb-04	374
(UNILAT INGUINAL HERNIA)	D A MULTI-CARE UNIT	3-Feb-04	3-Feb-04	1070
(DERANGEMENT MENISCUS NEC)	MULTI-CARE UNIT	3-Feb-04	3-Feb-04	1078
ENIGN NEOPLASM BREAST)	MULTI-CARE UNIT	3-Feb-04	3-Feb-04	1341
(SYNCOPE AND COLLAPSE)	MICU	3-Feb-04	4-Feb-04	1138
(SYNCOPE AND COLLAPSE)	HC MICU	3-Feb-04	4-Feb-04	1304
(ACUTE LEUK,UNSP CELL,WO REMSN)	4 T MICU	3-Feb-04	4-Feb-04	1316
(UNSPEC DENTAL CARIES)	MULTI-CARE UNIT	4-Feb-04	4-Feb-04	789
(OTH INJURY OTH SITE OF TRUNK)	MULTI-CARE UNIT	5-Feb-04	6-Feb-04	811
(FEM GENITAL SYMPTOMS NOS)	WICU	6-Feb-04	6-Feb-04	1306
(INT INFECT:BACT ENTERITIS NOS)	MULTI-CARE UNIT	6-Feb-04	7-Feb-04	750
(STREP SORE THROAT)	MULTI-CARE UNIT	6-Feb-04	7-Feb-04	1411

Appendix E
Current Surgical Patient Flow at the 121st General Hospital



Appendix F

**Military Health System Coding Guidance:
Professional Services and Specialty Coding Guidelines**

Version 1.0

Unified Biostatistical Utility

Calendar Year 2005

Effective 1 Apr 05

CODING AMBULATORY PROCEDURE VISIT (APV) ENCOUNTERS

Coding audits indicate that the DoD needs improvement in coding of APV procedures in five areas: procedure or service not coded; code(s) not supported by documentation; appropriate use of modifiers; appropriate use of quantity; and future focus on coding improvement (codes not matched to correct diagnosis, sequencing, and application of ancillary services). APV procedures can occur in the ambulatory procedure unit, emergency department, clinic, or outpatient activities on a ward. Diagnostic radiology and laboratory procedure codes should not be coded in Ambulatory Data Module since that workload is reported in other MHS systems. Administration of local anesthesia is not reported separately because it is considered part of the procedure.

Always use the 99499 code for the E&M code, even though some versions of ADM do not require an entry in that field. This will remain in effect until the APG grouper is fixed due to a software problem.

7.1. Definitions.

The definition of APV per Department of Defense Instruction (DoDI) 6025.8, Subject: Ambulatory Procedure Visit (APV), dated September 23, 1996, was modified by the UBU effective 01 Oct 2004.

Ambulatory Procedure Visit (APV)

APVs are defined as procedures or surgical interventions that require pre-procedure care, a procedure to be performed, and immediate post-procedure care as directed by a qualified health care provider. Minor procedures that are performed in the outpatient clinic setting that do not require post-procedure care by a medical professional shall not be considered APVs. The nature of the procedure and the medical status of the patient combine for a requirement for short-term care, but not inpatient care. These procedures are appropriate for all types of patients (obstetrical, surgical and non surgical) who by virtue of the procedure or anesthesia require post-procedure care and/or

monitoring by medical personnel. Requiring an individual to remain in the area for a period of time, such as remaining 20 minutes after an injection, is not post-procedure care.

Ambulatory Surgery Program

A facility program for the performance of elective surgical procedures is defined as an ambulatory procedure visit (APV) in DODI 6025.8. APV care is not to exceed 23 hours and 59 minutes, measured from the time the patient care begins in the MTF to the time the patient no longer requires medical supervision. Being “checked in” in CHCS is not the beginning of patient care. Frequently, care begins a significant amount of time after the nurse activates the encounter in CHCS. An APV patient who stays beyond 24 hours past actual patient care start time must be admitted to a hospital as an inpatient, if medically necessary. APV patients staying beyond 24 hours after start of care are not automatically admitted. As with any admission, there must be a written order from a provider to change an APV to an admission.

Observation is not an ambulatory procedure visit.

Ambulatory Procedure Units (APUs)

APUs are designated MTF approved locations/areas that are specially equipped and staffed to perform the level of care associated with APV services. – APUs provide a coordinated program of care for patients usually requiring care of fewer than 24 hours

7.2. Coding Pre- and Post Procedure APV Encounters

Global surgery coding for DoD does not necessarily follow civilian guidelines–In the DoD, each privileged provider-patient encounter, with medical decision making, that is documented, is collected in the Ambulatory Data Module. The encounter when a decision for surgery is made is coded as an E&M. If the decision for surgery is made within 24 hours of a procedure with a 90 day postoperative period, the E&M is appended with the -57 modifier. If the decision for surgery is made at the same encounter as a procedure with a 0 or 10 day postoperative period, the E&M is appended with a -25 modifier. The procedure is coded with a 99499 E&M and the procedure

code. Uncomplicated post-operative encounters are coded with a 99499 E&M and a 99024 procedure code

Usually a preoperative history and physical is done a few days prior to the scheduled surgery to ensure the patient is a candidate for surgery. The history and physical is coded based on documentation. The history and physical becomes part of the APV record. If a pre-op is done within 24 hours of a major operation (having a 90 day global post-operative period), then it is not coded unless the decision for surgery was made at that time. In that case, use a modifier -57 to indicate the decision for surgery was made during that E&M. Pre-operative encounters to check that there have been no significant changes in the patient's condition are not coded. If there is a significant change which requires medical intervention, or a completely different issue is addressed, the encounter should be coded.

Unlike some civilian coding guidance, all complications (conditions not expected for that point in time after the surgery) must be documented and coded with an E&M based on the complication documentation.

Visits during the postoperative period that are unrelated to the surgery should be coded and appended with the modifier -24.

Pre-operative appointments involving a nurse, but not involving independent medical judgment (but perhaps following medical staff approved decision tables) the day prior to a major surgery are usually performed outside the clinic visit. These encounters are not collected in the Ambulatory Data Module

7.3. Patient Admitted from APV

If a patient is admitted from an APV, the ADM record should be closed out with a disposition type of "admitted." The procedure codes associated with the APV will not be included in the inpatient stay.

7.4. Consultation for APV

When an APV patient requires a consultation, the consulted provider will code the consultation services in his specialty clinic.

7.5. Assistant at Surgery

When coding an APV, capture the additional providers (assistant surgeons) in the "Provider" field of the ADM screen. Do not code the anesthesia provider on the same ambulatory data record as the surgeon. For anesthesia coding see section 6.1.

7.5.1. 99199, Institutional Component of an APV

There is no Current Procedural Terminology (CPT) or Healthcare Common Procedure Coding System (HCPCS) code for the institutional component of an ambulatory procedure visit (APV). In order to bill, the Military Health System will use the CPT code 99199 to indicate the institutional component of an APV.

All MTFs must discontinue using the CPT code 99199 as an "unlisted" code on or before 30 September 2004. CPT defines 99199 as an "Unlisted special service, procedure or report." Most military treatment facilities (MTFs) do not use the CPT code 99199. A few MTFs have used the CPT code 99199 to track "unlisted" services (e.g., services that currently do not have a code), such as a pediatrician sedating a patient so a radiologist may do a diagnostic imaging procedure.

Effective 1 October 2004, to ensure correct billing, the MHS will only use the CPT code 99199 for APV data collection and billing. - As the code is only for billing, there will not be a relative value unit associated with the CPT code 99199. As of 1 October 2004, using the CPT code 99199 in the MHS will mean "Institutional Component, Ambulatory Procedure Visit."

Because DoD is limited to reporting four procedures, list primary procedure first. When three or fewer procedures are performed, 99199 will be reported as the last procedure on the lead surgeon's

SADR. When four or more procedures are performed, then 99199 will be reported as the fourth procedure on the lead surgeon's SADR. The code 99199 will not be reported on other SADR associated with that APV. Also, 99199 will not be used for non-APU or office procedures.

7.6. Coding Cancelled APVs

The E&M 99499 will be used for cancelled APVs. In the civilian sector there is no requirement for an E&M, but our computer system currently requires one.

If a patient presents for an APV, but the procedure is cancelled because:

- Patient develops a condition that contra-indicates the surgery (V64.1). For example, patient experiences arrhythmia that causes the procedure to be terminated,
- Patient decides not to have the planned surgery (V64.2),
- The provider is unavailable to perform the APV, or
- Supplies or necessary resources are not available to support the APV (V64.3).

Mark the appointment/encounter as "kept." Code 99499 along with CPT procedure code 2000F (blood pressure, measure) as placeholders.

It may be necessary to also code presenting medical conditions (e.g., fever, elevated hypertension) that prevented the procedure from being carried out. The first diagnosis coded should be the pre-operative diagnosis, secondary diagnosis should be the conditions that prevented the procedure to be performed, then the appropriate V64*.

If a scheduled procedure was started but not completed, then use the appropriate surgical CPT code with appropriate modifier;

- 52 Reduced Services: Service or procedure that is partially reduced or eliminated at the provider's discretion.
- 53 Discontinued Procedure: Use when anesthesia has been started or the patient has been prepped in the operating room suite.