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14. ABSTRACT

The Military Health System (MHS) uses relative value units per provider per day (RVU/PP/PD) to measure the productivity of its primary care providers. The purpose of this Graduate Management Project (GMP) is to look at productivity in the Department of Family and Community Medicine (DFCM) and determine whether a reason can be found as to why the RVU/PP/PD fell below the Army goal of 15.4 RVU/PP/PD for five months in fiscal year 2006. The data analyzed consists of 1252 primary care provider months from eight MEPRS in the DFCM. Logistics regression revealed that provider skill set pediatric and pediatric nurse practitioner lends to a 94% and 186%, respectively increase in the likelihood of meeting the RVU/PP/PD productivity goal and that provider type GS lends to an 82% increase in the likelihood of meeting the RVU/PP/PD productivity goal. Of the 1252 primary care provider months only 36% met the Army RVU/PP/PD goal. Two main factors found during the analysis that lend to a lower rate of meeting the goal are the electronic medical record (AHLTA) that was implemented at the beginning of fiscal year 2006, and the reliability and validity of UCAPERS data that is required to compute the RVU/PP/PD formula.

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An Analysis of Primary Care Provider Productivity in the Department of Family and Community Medicine at Carl R. Darnall Army Medical Center

A Graduate Management Project

Submitted to the Faculty of

Army-Baylor Graduate Program in Health and Business Administration

By

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June 8, 2007

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Abstract

The Military Health System (MHS) uses relative value units per provider per day (RVU/PP/PD) to measure the productivity of its primary care providers. The purpose of this Graduate Management Project (GMP) is to look at productivity in the Department of Family and Community Medicine (DFCM) and determine whether a reason can be found as to why the RVU/PP/PD fell below the Army goal of 15.4 RVU/PP/PD for five months in fiscal year 2006. The data analyzed consists of 1252 primary care provider months from eight MEPRS in the DFCM. Logistics regression revealed that provider skill set pediatric and pediatric nurse practitioner lends to a 94% and 186%, respectively increase in the likelihood of meeting the RVU/PP/PD productivity goal and that provider type GS lends to an 82% increase in the likelihood of meeting the RVU/PP/PD productivity goal. Of the 1252 primary care provider months only 36% met the Army RVU/PP/PD goal. Two main factors found during the analysis that lend to a lower rate of meeting the goal are the electronic medical record (AHLTA) that was implemented at the beginning of fiscal year 2006, and the reliability and validity of UCAPERS data that is required to compute the RVU/PP/PD formula.

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Introduction

The purpose of this research is to conduct an analysis of primary care provider productivity in the Department of Family and Community Medicine (DFCM) at Carl R. Darnall Army Medical Center (CRDAMC). CRDAMC is located on Ft Hood in central Texas. The Medical Treatment Facility (MTF) has nearly 2,500 military, civilian and contractor personnel supporting 160,000 Tricare beneficiaries living within the hospital's catchment area. On an average day, there are 3,867 primary care outpatient visits made, 26 surgeries performed, seven babies delivered, 170 visits to the emergency department and 5,000 prescriptions filled.

Historically, DFCM experiences a summer under lap due to provider turnover (seasonal trending) that leaves the department critically short primary care providers until the September/October time frame. In July 2005, Armed Forces Health Longitudinal Technology Application (AHLTA) was implemented throughout DFCM immediately causing an increase in time for each patient encounter to be documented. AHLTA is an electronic medical record that requires the provider to personally input data during and following an encounter. This data entry requirement has resulted in additional time to complete each patient encounter. Consequently, the number of patient appointments per primary care provider per day was scaled back from 24 patients to 20, and since then several attempts with significant operational turbulence have been made to gradually increase the number of available appointments. Currently, DFCM averages 22 available patient appointments per provider per day.

As a result of the Global War on Terrorism (GWOT), provider borrowed military manpower (BMM) continuity of care throughout DFCM clinics is limited at best. Both the 4th Infantry Division (Mechanized) and 1st Cavalry Division are on rotating back-to-back deployments in support of Operation Iraqi Freedom (OIF) with two years on station between

deployments. This has caused an increase in mission readiness exercises, gunnery qualification support, and other mandatory training events that has taken provider BMM out of the clinics often with little or no advance notice.

Primary care is a core competency for CRDAMC. The primary care provider frequently represents the first medical interaction between the beneficiary and the MTF. In this role, the primary care provider is responsible for the majority of the preventive care to keep beneficiaries healthy and prevent them from having to use the more costly specialty care. The primary care provider in a MTF is the manager of healthcare services.

The Military Health System (MHS) uses the relative value unit (RVU) to determine the productivity of its primary care providers. RVUs are used by the Centers of Medicare and Medicaid Services (CMS) and other third party payers to determine the comparative worth of physician services based on the amount of resources involved in furnishing each service. The MHS uses a modified version of the RVU to reflect the relative expense of the primary care provider's effort for a particular procedure or service. This relative expense equates to primary care provider productivity.

Total MHS outpatient workload is measured in two ways: as the number of encounters (outpatient visits and ambulatory procedures) and by the total number of RVUs generated. The latter measure reflects resources consumed by an encounter as compared to the average of all encounters. The purpose of this metric is to focus on the productivity of the direct care system at the provider level. Productivity is measured as the number of RVUs, per primary care provider, per day in the MHS. (Tricare, 2007).

Conditions prompting this study

Primary care provider productivity in the MHS is measured in RVUs. The Department of Family and Community Medicine (DFCM) within CRDAMC has been experiencing a decline over the last six months in either meeting or exceeding the Army goal of RVUs per primary care provider per day.

Why are we so concerned with the RVU that measures provider productivity in the MHS? Staffing levels and funding are highly dependent on the ability to demonstrate efficient use of resources. RVUs, per provider, per day is one of the top metrics used by the Office of the Surgeon General (OTSG) and Medical Command (MEDCOM) for decisions concerning: Army transformation (assignment of resources for population increases), Officer Distribution Plan (allocation of military providers), TRICARE Business Plans and Awards and distribution of staff and resources to sites where they will be best utilized (i.e. return on investment).

Statement of the Problem

Compared to previous months in fiscal year 2006, the Department of Family and Community Medicine (DFCM) started to experience a decline (as of February 2006) in either meeting or exceeding the MEDCOM standard of 15.4 Relative Value Units per primary care provider per day (RVUs/PP/PD) (Appendix A). Has provider productivity gone down the past few months because of less work load or has work load data been improperly reported? If work load went down was it because there were less patients, a higher than usual patient no show rate or facility related issues that prevented primary care providers from being able to see patients.

Literature Review

To put controls on health care costs, CMS, a federally funded program, implemented a payment schedule based on a resource-based relative value scale (RBRVS). The RBRVS has

been used by CMS since January 1, 1992. The RBRVS was a way for the federal government to put a cap on payment for physicians' services. According to the American Association of Health Plans' 1998 annual report , over half (56.3)% of the Health Maintenance Organizations (HMOs) paying fee-for-service to primary physicians and specialists base their fees on the CMS Fee Schedule (i.e. the RBRVS) or a factor of it (Glass & Anderson, 2002a). The RBRVS uses the RVU to measure the clinical effort that is involved in conducting a medical service or procedure on a patient. The use of the RVU to measure provider productivity is more accurate than looking at dollars billed or collected for medical services or procedures (Albritton, 1997). RBRVS payments for services are derived from the resource costs required to provide them.

Resource costs consist of three components. These components are physician work, practice expense and malpractice expense. These three components combined are referred to as a total RVU. On average, the RVU work component accounts for 54% of the total RVU for a medical procedure, practice expense averages approximately 41%, and malpractice insurance comprises the remaining 5% (Glass & Anderson). An example of an RVU calculation is shown in Table 1.

Table 1

Relative Value Unit Calculation

CPT Code	Description of procedure: Outpatient visit	RVUw	RVUpe	RVUm	Total relative value	Encounter
99212	Minor to low severity	0.45	0.59	0.02	1.06	1
99213	Low to moderate severity	0.67	0.72	0.02	1.41	1
99214	Moderate to high severity	1.10	1.07	0.04	2.21	1

(Note: w = physician work; pe = practice expense; m=malpractice)

Practice expenses (RVUpe) and malpractice expenses (RVUm) are not applicable to physicians in the MHS. Providers who are employed by the MHS do not incur practice expenses because the facilities they work in are property of the federal government. Federal employees

receive medical malpractice coverage from the Federal Tort Claims Act (FTCA). The FTCA holds the United States legally responsible for the acts of its employees (acting within the scoop of their job) (Federal Torts Claim Act, 2006). The resource cost component physician work (RVUw) equals provider productivity. According to Hsiao and colleagues, physician work has four dimensions: (1) time, (2) mental effort and judgment, (3) technical skill and physical effort, and (4) psychological stress (Yeh, 1999). The MHS uses the RVUw of the total RVU to measure primary care provider productivity.

Primary care productivity in the MHS is measured using the RVU. RVUs are earned through current procedural terminology (CPT) codes. CPT codes indicate the procedure, injection or immunization performed. If not referring to a specific procedure the term evaluation/management services (E&M) code maybe referred to. E&M codes are a subset of CPT codes. E&M codes reflect the complexity of the encounter. CPT/E&M codes have associated weights and that weight is referred to as a RVU. The American Medical Association (AMA) has maintained and published the CPT code list since 1966. The most recent version of CPT, CPT 2006, contains 8,568 codes and descriptors (http://www.ama-assn.org). These codes are five digits in length and range from 00100-99499.

The proper coding of CPT codes is imperative. Rules for assigning appropriate CPT codes are complex. If medical services and procedures are inaccurately or inappropriately coded, then an RVU analysis may reflect dramatically skewed data (Anderson & Glass, 2002b). Coding takes place in the Ambulatory Data Module (ADM) of the Composite Health Care System (CHCS). Individuals who are determining the appropriate codes need to receive proper training and credentialing. This would include any office or clinic personnel who play a significant role in coding. CHCS data is forwarded to the MHS Management Analysis and

Reporting Tool (M2). The M2 is where OTSG and MEDCOM go when they want to know how productive an MTF or clinic is. Because of the effort to improve medical coding there has been a decrease in the average level of complexity being reported in the medical record (Defense Health Program, 2007). This type of decrease results in less RVUs thus possibly sending a incorrect message that provider productivity is getting worse.

Capturing primary care provider productivity in the MHS can be challenging. Since fiscal year (FY) 2003 the Army goal has been 15.4 RVUs per provider per day (RVUs/PP/PD). The MHS productivity metric is the number of RVUw visits per Full-time Equivalent (FTE) provider per 8-hour day in a primary care clinic.

An FTE for a provider can be calculated by dividing the total number of actual clinical hours by 168 (8 hour day x 21 work days in the average month). Clinical hours along with hours spent conducting meetings, training and/or administrative duties are consolidated. This information is then reported by the provider and verified and forwarded by the departments to the MTF Division of Resource Management (DRM). The DRM consolidates all FTE data on the Uniform Chart of Accounts Personnel (UCAPERS).

The purpose of UCAPERS is to meet DoD MEPRS (Medical Expense and Performance Reporting System) reporting requirements and MEPRS is mandated by Congress to track DoD expenses. MEPRS requires man hours, full-time equivalent, and expense data on all employees of the MHS. The UCAPERS started phasing in during October 1979, establishing uniform accounting and reporting procedures for all MTF's (UCAPERS SOP, 2003).

MEPRS codes are used to track expenses and operating performance data in the MHS. The following are primary care clinics in the MHS and their respective MEPRS code: Internal Medicine Clinic (BAA), Pediatrics Clinics (BDA), Adolescent Clinic (BDB), Well Baby Clinic

(BDC), Pediatric Clinics Cost Pool (BDX), Family Practice Clinic (BGA), Family Practice Cost Pool (BGX), Primary Care Clinics (BHA), Medical Examination Clinic (BHB), Immediate Care Clinic (BHI), Primary Care Clinics Cost Pool (BHX), Primary care clinics NEC (BHZ), Flight Medicine Care Cost Pool (BJA), Undersea Medicine Clinic (BKA). The code following each clinic is called a Military Expense and Performance Reporting System (MEPRS) code (DHP Metric Handbook, 2002).

It should not be assumed that because providers have a medical degree that they are experts in productivity. According to Wahls providers in the United States while in training receive little service training. Providers usually do not receive productivity training in the form of time management, information management, practice efficiency, and business strategies. Productivity and business training compete for time with the technical aspects of medical training so is often omitted. The common practice has been for providers to develop these skills through years of trial and error. Employers could greatly benefit by providing formal instruction and mentoring to providers in the area of productivity (Wahls, 2000).

Not all healthcare organizations utilize the RVU to determine primary care provider productivity. The Department of Veterans Affairs (VA) is one of those organizations. The VA utilizes the rate at which providers see patients. This process sounds reasonable but has potential problems. Older, sicker and more complicated patients tend to require more time with a primary care provider then do young and healthy patients. The experience and education level of the trainee, resident or provider will also result in varying levels of productivity (Provider Productivity Benchmarks, 2006).

There are very few primary care provider productivity studies that have been conducted. In two VA studies that were conducted at different facilities the formula component time was

captured differently. In one facility provider productivity rate was the number of patients seen compared to the total amount of time actually spent with patients. Results from this study were that providers averaged 1.62 visits per hour, with resident providers averaging 1.09 visits per hour compared with 1.82 visits per nonresident providers (Duck, 2001). In the other facility total time on-site was used instead of time with patients. The results from this study were 1.22 visits per hour. A private practice provider productivity study revealed significantly higher numbers than the VA studies with a 3.1 visits per hour. Reynolds and Company found that providers working as employees or in large metropolitan areas have lower than average productivity (Duck, 2001).

Automation can have an impact on primary care provider productivity. In 2005, CRDAMC implemented an outpatient electronic medical record system. This system is called the Armed Forces Health Longitudinal Technology Application (AHLTA). The electronic medical record when utilized properly should include all diagnoses, all orders, all encounters, all dictated notes, and a mix of clinical variables from selected clinical sites (McDonald, 1997). Having all this information consolidated in one place not only allows for easy access but allows for the continuity of patient care. Effective continuity of care should result in less utilization of health care services (i.e. no redundancy in lab and radiology tests from provider to provider).

The common practice prior to the outpatient electronic medical record or still yet in facilities with out it was that the patient or the medical treatment facility maintained a hard copy outpatient medical record. Many times these hard copy records became misplaced and were not available for primary care providers during patient visits. Not having a documented medical history readily available can result in longer patient appointments. Longer patient appointments lead to fewer patients seen and lower provider productivity. Additionally, the lack of the record

present can lend to the primary care provider prescribing treatments that have previously not remedied the problem or ordering tests that have already been performed (i.e. lab or radiology tests). These records still exist and continue to be maintained by MTFs because of the patient medical history within them.

The electronic medical record (EMR) is a useful resource but involves extensive input from primary care providers. The required input could result in patient encounters taking longer. Longer patient encounter time could result in lower primary care provider productivity. A study evaluated the EMR for efficiency; the study showed it took providers 30 days to return normal levels of productivity and that the average patient encounter increased 2 minutes. A different study revealed utilization rate decreases in the range of 8.5 to 24 percentage points. The primary services affected were laboratory and radiology testing (Chaudhry, et al., 2006).

The number of exam rooms per provider can have a large impact on primary care provider productivity. As the number of exam rooms per provider increases so does their provider productivity ratio. A survey analysis conducted in New York City in late 1997 looked at the number of exam rooms and productivity. One in three sites of the 97 facilities in the survey had fewer than two exam rooms per provider, including some sites that had less than one exam room per provider. In the facilities that had two or less exam rooms productivity was considerably lower. Provider productivity for less than one exam room, at least one exam room but less than two and two exam rooms or more was respectively .61, 1.54 and 2.61 patients per hour (Duck, 2001). It is recommended that primary care providers have a minimum of two exam rooms each. Having two exam rooms allows the primary care provider to consult with one patient in one exam room while the next patient to be seen is being prepped by supporting staff in the other exam room.

Patients not showing for appointments have an effect on primary care provider productivity. No-show patients are those patients who failed to keep or cancel a scheduled appointment. Patients who miss medical appointments and fail to properly cancel often result in increased provider frustration, and reduced levels of provider empathy and patient to provider communication (Ciechanowski, et al., 2006). No shows negatively affect the health care system because of the appointments that unexpectedly go unutilized. Appointments not utilized equate to no RVUs being generated and unnecessary referrals being sent to the network. Referrals to the network cost the Government money. Empirical evidence in studies reveals that patients with high rates of missed appointments often have a history of failed appointments, have psychosocial problems, and have health benefits provided by the government (Lacy, et al., 2004).

Purpose

The purpose of this analysis is to look at primary care provider productivity in the DFCM and determine whether a reason can be found as to why the Army goal of 15.4 Relative Value Units per provider per day (RVUs/PP/PD) is not being met.

Methods and Procedures

Unit of Analysis

The primary unit of analysis is primary care providers from the DFCM. The DFCM clinics included in the analysis are Thomas Moore Health Clinic (TMHC), Bennett Health Clinic (BHC), Monroe Health Clinic (MHC), Cove Family Care Clinic (CFCC), and Family Medicine Residency Center (FMRC). Also included in the DFCM, but not included in the analysis, are the Weekend Acute Care Clinic (WACC), After Hours Clinic (AHC), Troop Medical Clinic 10 (TMC 10), Troop Medical Clinic 12 (TMC 12), and Troop Medical Clinic 14 (TMC 14). Primary care providers in the DFCM include Family Practice (FP), Physician Assistant (PA) Family Nurse Practitioner (FNP), Pediatrics Nurse Practitioner (PNP), Pediatrics (PEDS), and

other. The clinics vary in the services they provide (i.e. adult care and/or peds care) so MEPRS codes will be one of the independent variables. The MEPRS codes for the DFCM clinics used in the analysis are shown in Table 2.

Table 2

MEPRS Codes for the DFCM Clinics in the Analysis

MEPRS Code	Clinic	MEPRS Code	Clinic
BGAV	TMHC ADULT	BGAN	MHC
BDAV	TMHC PEDS	BGAE	COVE ADULT
BGAJ	BHC ADULT	BDAT	COVE PEDS
BDAJ	BHC PEDS	BGAA	FMRC

Data Collection Process

Data analysis is based on objective historical review of variables directly effecting primary care provider productivity (data mining will encompass all of fiscal year 2006). Using a quantitative analysis, we will prove beyond a reasonable degree of certainty the cause and effect relationship between variables with a direct correlation to provider productivity.

A retrospective analysis of fiscal year 2006 (FY06) RVU/PP/PD within DFCM will be conducted. FY06 includes the months of October 2005 through September 2006. The information technology systems accessed for this analysis include Management Analysis and Reporting Tool (M2), UCAPERS and CHCS/AHLTA. The M2 was used to capture RVUs and encounters per month for each primary care provider. UCAPERS was used to capture available clinic hours per month for each primary care provider. CHCS/AHLTA was used to capture CPT (E&M) code level data per month for each of the eight MEPRS. This data indicates the CPT (E&M) code and the quantity of each code that was performed during a particular month or during the entire FY.

The assigned FTEs and available FTEs data will be gathered from UCAPERS. UCAPERS provides the hours of patient care conducted by each primary care provider. UCAPERS has the number of patient care hours and the number of hours primary care providers were involved in activities other than patient care that do not contribute to provider productivity. These other activities include but are not limited to: administration time, graduate medical education/graduate education (GME/CDE), continuing medical education (CME), leave, sick, deployed, field training exercise (FTX), physical training (PT) and etc.

The data used in computing RVU/PP/PD comes from both M2 and UCAPERS. The equations for determining RVU/PP/PD are RVUs/ ((Available FTEs *168)/8) or RVUs/ (Available Hrs/8) both give you the same answer. First, the available FTEs part of the equation is computed by taking the number of primary care provider available clinic hours divided by 168. The number 168 (8 hour work day multiplied by 21 average number of work days in a month) was chosen as the standard metric by the MHS to equate to 1.0 FTE. In Table 3, for example Provider L had 38 available clinic hours during the month of October. Thirty-eight divided by 168 equals .23. During the month of October Provider L was considered a .23 Available FTE. A provider who has available clinic hours of 168 would be equal to 1.0 FTE.

To extend this analysis the RVU/PP/PD for Provider L were computed by taking 36.42/ ((.23x168)/8) or 36.42/ (38/8) which both equate to approximately 7.67 RVU/PP/PD. Additional data in Table 3 that could be used for determining provider productivity are clinic visits (encounters) and RVUs per visit. RVUs per visit are computed by taking the number of RVUs divided by the number of clinic visits. If it is determined the UCAPERS data is not valid the combination of the clinic visits and RVUs per visit would be an alternative to determining primary care provider productivity.

Table 3

OCT 2006 Data for Explaining how RVU/PP/PD and AVL FTE are Equated

PROVIDER	Clinic Visits	RVUs	AVL HRS	AVL FTEs	RVUs Per Visit	RVU/PP/PD
L	47	36.42	38	0.23	0.77	7.67
M	297	270.18	134	0.80	0.91	16.13
N	125	79.33	87	0.52	0.63	7.29
O	168	75.52	48	0.29	0.45	12.59

Research Objectives:

1. Determine the association ***Medical Expense and Performance Reporting System Code*** has on provider productivity.
2. Determine the association ***provider skill set*** has on provider productivity.
3. Determine the association ***type of provider*** has on provider productivity.
4. Determine the association ***provider skill set and type of provider together*** have on provider productivity
5. Determine the association ***encounter*** has on provider productivity.
6. Determine the association ***relative value unit*** has on provider productivity.
7. Determine the association ***available full time equivalent*** has on provider productivity.

Hypotheses:

Null Hypothesis (H_0): There is no factor that predicts the dependant variable provider productivity.

$$H_0: b1 = b2 = b3 \ldots b7 = 0$$

Alternative Hypothesis (H_a): At least one factor predicts the dependant variable provider productivity.

$$H_a: b1 \neq b2 \neq b3 \ldots b7 > 0$$

* Where β_1 = MEPRS, β_2 = PROSKILL, β_3 = TOP, β_4 = PROSKILL/TOP, β_5 = ENCOUNT, β_6 = RVU, β_7 = FTEAS

Statistics:

Logistics Regression is being utilized to identify whether the null hypothesis is accepted. If the null hypothesis is rejected than the alternate hypothesis is accepted. Significance will be

accepted at the $p < .05$ level. Statistically only one independent variable needs to have a $p < .05$ level to reject the null and accept the alternate hypothesis.

Logistics regression is used when the dependent variable is dichotomous. The dependent variable in this research is provider productivity and is coded 0 and 1, representing whether a primary care provider met or failed to meet the provider productivity benchmark of 15.4 RVU/PP/PD (DHP, 2002). Provider productivity of 15.3 or less RVU/PP/PD is coded 0 and 15.4 or greater RVU/PP/PD is coded 1. Linear regression has a dependent variable that is continuous and is why it is not being used in this research. The decision was made to not use linear regression because15.4 RVU/PP/PD has been determined by MEDCOM as being productive. Logistics regression is able to take a dichotomous variable and form it into a nearly normal distribution. Independent variables that are not all continuous are another benefit of using logistics regression. Logistics regression can operate with a combination of continuous, categorical and binary independent variables.

Logistics Regression Equation:

$$\text{Prob (met productivity goal)} = \mathbf{Y}i = \frac{e^{+b0\,(\text{CONSTANT})\,+b1(\text{MEPRS})+b2(\text{PROTYP})+b3(\text{TOP})+b4(\text{PROTYP\&TOP})+ b5(\text{ENCOUNT})+b6(\text{RVU})+b7(\text{FTEAV})}}{1 + e^{+\,b0(\text{CONSTANT})+b1(\text{MEPRS})+b2(\text{PROTYP})+b3(\text{TOP})+b4(\text{PROTYP\&TOP})+ b5(\text{ENCOUNT})+b6(\text{RVU})+b7(\text{FTEAV})}}.$$

The dependent variable is provider productivity (RVU/PP/PD) operationally defined as Relative Value Units, per provider, per day. The b_0 is a constant and is located on the y-intercept if all other constants are zero. All of the independent variables are listed in Table 4. *e*: represents random error from the regression analysis report.

Table 4

Independent Variables

Variable	Abbreviation	Definition (Variable Type)
Medical Expense and Performance Reporting System Code	MEPRS	Codes used to track expenses and operating performance data in the Military Health System (MHS). Each clinic has one or more.
Provider Skill Set	PROTYP	The DFCM provider skill sets are Family Practice (FP), Physician Assistant (PA) Family Nurse Practitioner (FNP), Pediatrics Nurse Practitioner (PNP), Pediatrics (PEDS), and Other.
Type of Provider	TOP	The type of providers in the DFCM are Military, Civil Service (GS), Contracted and Borrowed Military Man Power (BMM).
Provider Skill Set and Type of Provider	PROTYP&TOP	Combination of PROTYP and TOP
Clinical Visit Encounter	ENCOUNT	Number of personal seen by DFCM primary care provider
Relative Value Units	RVU	Relative Value Unit is the weighted measure of effort/complexity involved in a given patient visit. (continuous)
Available Full Time Equivalent	FTEAV	FTE calculated by dividing the total number of available clinical hours by 168 (8 hour day x 21 work days in the average month).

There are three primary goals of the analysis. The first is to determine if there is a salient variable or a multiple variables that contribute most to primary care provider productivity. The second goal is to assess how each variable differs from clinic to clinic. Lastly, is to educate administrators and clinical personnel on the findings and implement best practice techniques that lend to the greatest primary care provider productivity across the DFCM.

Measurement Instrument

Data will be collected from multiple information technology (IT) systems and consolidated into a Microsoft Excel spreadsheet. The IT systems include MEPRS, UCAPERS, CHCS, AHLTA and M2. Once the available data is inputted to the spreadsheet it will be

screened for improperly coded and missing data. After it is verified that the data are complete they will be transferred to SPSS 12.0 for Windows. All calculations and analyses will be performed in SPSS 12.0.

Descriptive Statistics

Descriptive statistics are methods used to describe or summaries collected data. Descriptive statistics for this study can be seen in Appendix A. The descriptive statistics show there are no missing data and provides the RVU/PP/PD N, minimums, maximums, means, standard deviations, medians and ranges as they correspond to the cross tabulation of provider type, provider skill set and MEPRS. The Army and MEDCOM do not use total RVUs to measure primary care provider productivity; potentially in the future this could be a more consistent way of measuring provider productivity (Appendix B).

Validity and Reliability

Incorporated into the analysis was validity and reliability. The information technology systems from which data were retrieved are generally accurate and well managed systems. MEPRS, UCAPERS, CHCS, AHLTA and M2 generate data that is constantly used in the MHS and in other research. One of the assumptions regarding the automated systems is that data in the systems was entered correctly and will provide accurate results.

Ethical Consideration

No provider names were mentioned throughout the paper. Provider names were coded so as to assure an ethical standing in the research. There was no specific system used to code provider names it was done through random assignment of numbers ranging from 100 to 567. There is no way of identifying the providers that produced the least, median or most RVUs in the

analysis. Providers who are identified as outliers will be notified but that data will not be captured in this analysis by name.

Results

The data set used in the analysis has 1252 lines each representing a primary care provider month. In total there are 186 primary care providers that account for 1252 primary care provider months (Table 5). Each of the primary care providers in the analysis accounts for 1 to 20 of the 1252 primary care provider months. The difference of 1 to 20 is reflected by how many months in FY06 they had clinic visits and under how many MEPRS per month. Examples are as follows: Primary care provider who had clinic visits under one MEPRS code for all 12 months accounts for 12 of the 1252 primary care provider months; A primary care provider who had clinic visits under two MEPRS codes for four months and under one MEPRS for seven months accounts for 15 of the 1252 primary care provider months.

Table 5

Primary Care Providers in Comparison to Quantity of Months They Represent

PRIM CARE PROV MONTHS	PRIMARY CARE PROVIDERS	CUM PRIM CARE PROVI MONTHS	TOTAL PERCENT	CUMUALTIVE PERCENT
1	37	37	2.96	2.96
2	19	75	3.03	5.99
3	15	120	3.59	9.58
4	8	152	2.56	12.14
5	8	192	3.20	15.34
6	9	246	4.31	19.65
7	6	288	3.35	23.00
8	7	344	4.48	27.48
9	10	434	7.18	34.66
10	10	534	7.99	42.65

Table 5 (continued)

PRIM CARE PROV MONTHS	PRIMARY CARE PROVIDERS	CUM PRIM CARE PROVI MONTHS	TOTAL PERCENT	CUMUALTIVE PERCENT
11	7	611	6.15	48.80
12	36	1043	34.51	83.31
13	7	1134	7.27	90.58
14	2	1162	2.23	92.81
15	1	1177	1.20	94.01
18	2	1213	2.87	96.88
19	1	1232	1.52	98.40
20	1	1252	1.60	100.00
	186	1252	100.00	100.00

Throughout the entire fiscal year there were a total of 186 primary care providers who saw patients in one or more of the eight MEPRS being analyzed. The entire fiscal year primary care provider total should not be confused with the monthly quantities of primary care providers seeing patients. Table 6 shows by month the number of primary care provider months. The average primary care provider months per month for FY 06 were 104.33. The monthly average is 82 lower than the entire amount of primary care providers who seen patients during FY 2006. This monthly average is even a bit high because it represents the number of primary care provider months not the number of primary care providers. This average does not take into account when a primary care provider had clinic visits in more than one MEPRS in any given month it is counting the primary care provider under each MEPRS.

Table 6

Primary Care Provider Months per Month in FY 06

	Frequency	Percent
OCT	115	9.19
NOV	95	7.59
DEC	107	8.55
JAN	105	8.39
FEB	99	7.91
MAR	100	7.99
APR	107	8.55
MAY	107	8.55
JUN	108	8.63
JUL	102	8.15
AUG	105	8.39
SEP	102	8.15
Total	1252	100.00

Medical treatment facilities have high turn over rates in primary care providers is one of the reason for the large difference in the yearly and monthly amounts of primary care providers. Military primary care providers relocate during a permanent change of station contributes to high turn over. Civilian primary care providers may find jobs with higher pay and benefits this contributes to high turn over or they may be a dependent of a Soldier who is in the process of a permanent change of station.

The Global War on Terror (GWOT) has resulted in less availability of BMM. BMM which was once heavily relied on year around to see patients is no longer a reliable means of primary care in the MTF. The use of BMM varies on whether the primary care providers are deployed or involved in training for an upcoming deployment. Throughout the year we have locum primary care providers that rotate through for 4-6 week periods. These reasons coupled

with more contribute to the wide variance in the yearly provider total and monthly averages of primary care providers.

The eight MEPRS that were analyzed belong to one of the five clinics that fall under the DFCM. Each clinic has a different enrollment size and beneficiary category mix because of this the quantity of primary care provider months is different for each MEPRS. Table 7 provides the number of primary care provider months per MEPRS. For example, Thomas Moore Health Clinic had 427 primary care provider months during FY 06 (BGAV frequency is 344 and BDAV frequency is 83 for a total of 427).

Table 7

Primary Care Provider Months per MEPRS for FY 06

	Frequency	Percent	Cumulative Percent
BDAJ (BHC PEDS)	32	2.56	2.56
BDAT (COVE PEDS)	20	1.60	4.15
BDAV (TMHC PEDS)	83	6.63	10.78
BGAA (FMRC)	118	9.42	20.21
BGAE (COVE ADULT)	61	4.87	25.08
BGAJ (BHC ADULT)	282	22.52	47.60
BGAN (MHC)	312	24.92	72.52
BGAV (TMHC ADULT)	344	27.48	100.00
Total	1252	100.00	

The Department of Family and Community Medicine averages in excess of 3,500 clinic visits on an average day. The five clinics of the department being looked at in this analysis have monthly averages and enrollment sizes that are astonishing. Thomas Moore Health Clinic (BGAV, BDAV) averages 9,000 family practice visits per month and have over 29,000 enrolled (23% Active Duty, 64% Active Duty Family Member, 13% Retirees/Retirees Family Members). Bennett Health Clinic (BGAJ, BDAJ) averages 4,000 family practice visits per month and has

over 23,800 enrolled (56% Active Duty, 38% Active Duty Family Member, 6% Retirees/Retirees Family Members). Darnall Family Medicine Residency Center (BGAA) averages nearly 3,000 family practice visits per month and has over 6,000 enrolled (32% Active Duty, 37% Active Duty Family Member, 31% Retirees/Retirees Family Members). Monroe Health Clinic (BGAN) averages 3,000 active duty visits per month and has over 11,000 enrolled (All Active Duty Soldiers). Cove Family Care Clinic (BGAE, BDAT) averages 1,700 family practice visits per month and has over 5,800 enrolled (69% Active Duty Family Member, 31% Retirees/Retirees Family Members).

The primary care provider skill set of the 1252 primary care provider months at the five clinics consists mainly of the following: family practice, physician assistant, family nurse practitioner, pediatrics, and pediatrics nurse practitioners. In total, these five provider skill sets account for 89.54% of the primary care provider months in the analysis (Table 8). The total number of pediatrics and pediatrics nurse practitioner primary care provider months accounts for 13.14% of the 1252 primary care provider months.

Table 8

Primary Care Provider Months by Provider Skill Set for FY06

	Frequency	Percent	Cumulative Percent
Family Practice	388	30.99	30.99
Physician Assistant	429	34.27	65.26
Family Nurse Practitioner	153	12.22	77.48
Pediatrics	115	9.19	86.66
Pediatrics Nurse Practitioner	36	2.88	89.54
Other	131	10.46	100.00
Total	1252	100.00	

The reason pediatrics accounts for such a small percentage is because most pediatric patients are seen by pediatricians that work in the Pediatrics Clinic. The Pediatrics Clinic sees patients under two MEPRS which are BDAA (Pediatric) and BDCA (Well Baby). The Pediatric clinic is part of the Department of Pediatrics and not the Department of Family and Community Medicine so their numbers are not part of the quantities in Table 8.

A medical treatment facility is a table of distribution and allowance unit (TDA). TDA organizations are considered non-deployable, even when overseas, as their missions are normally tied to a geographic location. The personnel of TDA organizations can be military, civilian, or a combination of both. The five clinics in this analysis are each staffed by a combination of both military and civilian primary care providers. Table 9 shows the quantity of primary care provider months by type of provider. Type of provider is defined as whether the primary care provider is military, GS, contracted or BMM. In FY06 the total number of primary care provider months is almost equal when comparing military to civilian. The totals are military 617 (Military + BMM) and civilian 635 (GS + Contracted). This equal mix of military to civilian in the data set is not a correlation of the staffing of each MEPRS.

Table 9

Primary Care Provider Months by Type of Provider for FY06

	Frequency	Percent	Cumulative Percent
Military	262	20.93	20.93
Civil Service (GS)	96	7.67	28.59
Contracted	539	43.05	71.65
Borrowed Military Man Power (BMM)	355	28.35	100.00
Total	1252	100.00	

Contracted primary care provider months alone accounts for 43.05% of the primary care provider months in FY06. One of the reasons why contracted is so high is because of the

GWOT. The GWOT has resulted in an increased demand for military primary care providers to be deployed. These deployed military primary care providers are replaced with temporary contracted primary care providers. Other reasons for the high number of contracted is turn over, locums, and additional requirements for more contracted primary care providers.

Table 10 shows that there is not an equal mix of military (Military + BMM) to civilian (GS + Contract) in the eight MEPRS. In the three pediatric MEPRS (BDAJ, BDAT and BDAV) and one adult MEPRS (BGAJ) civilian employees accounted for 95.10% to 100% of the primary care provider months in the data set. Not as large, but still significant was BGAV, whose civilian providers accounted for 70.10% of the primary care provider months. Military exceeded civilian in primary care providers in two MEPRS (BGAN and BGAA) their percentages were 89.90% and 76.30%, respectively. BGAJ is the only MEPRS of the eight that is similar when comparing military to civilian mix of primary care provider months. BGAJ mix was 52.90% military and 47.70% civilian.

Table 10

Cross Tabulation of MEPRS by Type of Provider and Provider Skill Set

	Percent /Total	Fam Prac	Phys Assist	Fam Nur Prac	Peds	Ped Nur Prac	Other	Total
BDAJ (BHC PEDS)	Military%	50.00			0.00	0.00		3.10
	Contract%	50.00			100.00	100.00		96.90
	Total #	2			25	5		32
BDAT (COVE PEDS)	GS%	100.00		0.00	0.00			5.00
	Contract%	0.00		100.00	100.00			95.00
	Total #	1		2	17			20
BDAV (TMHC PEDS)	Military%	100.00		0.00	0.00	0.00		3.60
	Contract%	0.00		100.00	100.00	100.00		96.4
	Total #	2		1	57	23		83

Table 10 (continued)

	Percent /Total	Fam Prac	Phys Assist	Fam Nur Prac	Peds	Ped Nur Prac	Other	Total
BGAA (FMRC)	Military%	71.40	0.00	94.10			90.90	72.90
	GS%	28.60	0.00	5.90			0.00	21.20
	Contract%	0.00	50.00	0.00			0.00	2.50
	BMM%	0.00	50.00	0.00			9.10	3.40
	Total #	84	6	17			11	118
BGAE (COVE	Military%	7.70	0.00	7.70	0.00			4.90
ADULT)	GS%	92.30	0.00	0.00	0.00			19.70
	Contract%	0.00	100.00	92.30	100.00			75.40
	Total #	13	13	26	9			61
BGAJ (BHC ADULT)	Military%	28.60	0.00	64.30	0.00	0.00	13.00	21.30
	GS%	0.00	7.60	28.60	0.00	0.00	0.00	7.10
	Contract%	69.50	24.80	7.10	100.00	100.00	17.40	40.10
	BMM%	1.90	67.60	0.00	0.00	0.00	69.60	31.60
	Total #	105	105	42	5	2	23	282
BGAN (MHC)	Military%	87.50	2.50	100.00			13.00	15.40
	GS%	12.50	5.00	0.00			0.00	4.20
	Contract%	0.00	9.00	0.00			1.30	6.10
	BMM%	0.00	83.40	0.00			85.70	74.40
	Total #	24	199	12			77	312
BGAV (TMHC	Military%	19.10	0.00	58.50	0.00	0.00	0.00	21.20
ADULT)	GS%	7.00	12.30	0.00	0.00	0.00	5.00	7.30
	Contract%	73.90	59.40	41.50	100.00	100.00	95.00	62.80
	BMM%	0.00	28.30	0.00	0.00	0.00	0.00	8.70
	Total #	157	106	53	2	6	20	344

The information technology systems knowledge and expertise level among administrators and clinicians in the DFCM varies. It was expected that there would be variations from clinic to clinic because data was inputted, reported, and/or coded improperly. An analysis of the raw data

that makes up the RVU/PP/PD indicates that there is a problem with the way provider hours are being reported in UCAPERS. The MEDCOM goal for primary care productivity is 15.4RVU/PP/PD. Looking at all the raw data indicates a number of outliers with RVU/PP/PD as low as zero and as high as a 137.62. The outliers are a result of the following: primary care providers over reporting clinical hours; primary care providers under reporting clinical hours; primary care providers not reporting any clinical hours; or primary care providers reporting all clinical hours in one MEPRS while they are have encounters in multiple MEPRS.

Included in Table 11 is raw data from October 2006 for one of the eight MEPRS in the analysis. This data set was chosen because it captured various types of outliers and is in no means consistent with the remaining 11 months of data for this MEPRS or any of the data for the other seven MEPRS. The primary care provider names and the MEPRS have been removed from Table 11 for ethical reasons. To maintain an ethical standing the 186 provider names in the data set being used in the analysis have been randomly coded with a P and a three digit number ranging from 100 to 567.

A conservative approach was used when looking for outliers in all data. In Table 11 there are many outliers. The low output outliers are providers 2, 7, 20, 21, 24, 33 and 39. These low output outliers had clinic visits ranging from six to 81 but because zero available hours were reported in UCAPERS for this MEPRS their RVU/PP/PD resulted in zero. Three other low output outliers are providers 1, 3 and 11. They are low output outliers because they reported a high amount of available hours but had very few clinic visits. The high output outliers are providers 6, 16, 25, and 31. These high output outliers could be a result of the primary care provider reporting far less hours than they were actually available.

Table 11

OCT 2006 Data for one of the MEPRS Included in the Analysis

	Clinic Visits	RVUs	AVL HRS	AVL FTEs	RVUs Per Visit	RVUs Per Day
1	1	0.71	15	0.09	0.71	0.38
2	6	3.2	0	0.00	0.53	0.00
3	6	4.26	98	0.58	0.71	0.35
4	141	100.34	99	0.59	0.71	8.11
5	3	1.35	4	0.02	0.45	2.70
6	73	58.64	8	0.05	0.80	58.64
7	11	2.42	0	0.00	0.22	0.00
8	257	210.99	108	0.64	0.82	15.63
9	39	34.91	30	0.18	0.90	9.31
10	101	69.98	52	0.31	0.69	10.77
11	3	2.87	134	0.80	0.96	0.17
12	47	36.42	38	0.23	0.77	7.67
13	297	270.18	134	0.80	0.91	16.13
14	125	79.33	87	0.52	0.63	7.29
15	168	75.52	48	0.29	0.45	12.59
16	123	88.72	10	0.06	0.72	70.98
17	50	37.33	27	0.16	0.75	11.06
18	312	189.59	106	0.63	0.61	14.31
19	10	8.2	10	0.06	0.82	6.56
20	12	3.78	0	0.00	0.32	0.00
21	81	69.99	0	0.00	0.86	0.00
22	87	58.68	45	0.27	0.67	10.43
23	133	72.83	35	0.21	0.55	16.65
24	9	8.86	0	0.00	0.98	0.00
25	11	15.09	4	0.02	1.37	30.18
26	92	67.2	40	0.24	0.73	13.44
27	9	4.72	3	0.02	0.52	12.59

Table 11 (continued)

	Clinic Visits	RVUs	AVL HRS	AVL FTEs	RVUs Per Visit	RVUs Per Day
28	20	26.46	34	0.20	1.32	6.23
29	12	10.76	10	0.06	0.90	8.61
30	17	10.12	20	0.12	0.60	4.05
31	48	36.41	10	0.06	0.76	29.13
32	51	43.82	40	0.24	0.86	8.76
33	9	5.06	0	0.00	0.56	0.00
34	59	43.46	20	0.12	0.74	17.38
35	259	179	86	0.51	0.69	16.65
36	17	9.89	5	0.03	0.58	15.82
37	52	40.31	40	0.24	0.78	8.06
38	10	8.76	5	0.03	0.88	14.02
39	13	8.76	0	0.00	0.67	0.00
					Total 464.63 RVUs / 39 Providers = 11.91RVU/PP/PD	

The entire data set is broken down into four RVU/PP/PD range categories in Table 12. The four categories are extremely low outlier, low outlier, one standard deviation, and high outlier. The extremely low outlier is those primary care provider months that likely reported no available clinic hours in UCAPERS. The low outlier is those primary care provider months that likely over reported available clinic hours. The one standard deviation is those primary care provider months that had +/- 6.6 RVU/PP/PD from the Army goal of 15.4 RVU/PP/PD. The high outlier is those primary care provider months that under reported their available clinic hours. The outlier categories and the fact that one standard deviation has a range of 13.2 is a discredit to the reliability and validity of the data set.

Table 12

Primary Care Provider Month RVU/PP/PD

	Frequency	Percent	Cumulative Percent
0 - .1	105	8.39	8.39
.2 - 8.7	194	15.50	23.88
8.8 - 22	853	68.13	92.01
22.1-137.62	100	7.99	100.00
Total	1252	100.00	

The Army utilizes RVUs per provider per day (RVU/PP/PD) to measure primary care provider productivity. The goal for primary care providers is 15.4 RVU/PP/PD. The data was coded with a 1 for primary care provider months that had RVU/PP/PD equal to or greater than 15.4. The remaining data was coded with a 0 for primary care provider months that had RVU/PP/PD less than 15.4. Table 13 indicates that only 35.94% of the 1252 primary care provider months met the Army goal of 15.4 RVU/PP/PD.

Table 13

Primary Care Provider Months RVU/PP/PD Goal Met Rate

	Frequency	Percent	Cumulative Percent
RVU Goal MET	450	35.94	35.94
RVU Goal NOT MET	802	64.06	100.00
Total	1252	100.00	

Logistics Regression Statistical Significance

Statistical Package for the Social Sciences (SPSS) 12.0.2, (SPSS Inc., 2004) was utilized in the analysis of the data. The significance was set at a alpha probability of $p < .05$. Significance is the indication whether the results of an analysis of data drawn from a sample are unlikely to have been cause by chance at a specified level of probability (usually 0.05 or 0.01).

The focus of the logistics regression analysis was the model summary and the variables in the equation. Table 14 is the model summary for logistics regression that included RVU/PP/PD goal met as the dependent variable and primary care provider skill set categories as the independent variables. The model is statistically significant and approximately 2 % of the variation is accounted for by the variables in the equation.

Table 14

Model Summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1615.383	0.016	0.022

Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

In logistics regression a variable serves as a referent category to prevent perfect multicollinearity. No results are reported for the referent category. The category that is left out is referred to as the reference category. Physician Assistant was selected as the reference category, in the first run, because it is the provider skill set that accounts for the largest percentage of primary care provider months in the analysis. Table 15 is the results of the logistics regression for the variables in the equation. Two independent variables are statistically significant at an alpha of .05. The two variables that are statistically significant are pediatrics and pediatrics nurse practitioner at .002, and .003, respectively. Each pediatric and pediatric nurse practitioner lends to a 94% and 186%, respectively increase in the likelihood of meeting the RVU/PP/PD goal.

Table 15

Variables in the Equation

	B	Exp(B)	Sig.
FP	-0.030	0.971	0.843
FNP	0.165	1.179	0.402

Table 15 (continued)

	B	Exp(B)	Sig.
ED	0.662	1.939	0.002
PEDNP	1.051	2.860	0.003
Other	0.264	1.302	0.201
Constant	-0.714	0.490	0.000

Variable(s) entered on step 1: FP, FNP, PED, PEDNP, Other.

In the second run physician assistant was replaced with family nurse practitioner as the reference category. Family nurse practitioner was chosen as the reference category in this logistic regression run because it is a provider skill set that falls in a middle category when considering the percentage of primary care provider months in the analysis. There are two independent variables in Table 16 that are statistically significant at an alpha of .05. The two variables that are statistically significant are pediatrics and pediatrics nurse practitioner at .048, and .019, respectively. Each pediatrics and pediatrics nurse practitioner lends to a 64% and 143%, respectively increase in the likelihood of meeting the RVU/PP/PD goal.

Table 16

Variables in the Equation

	B	Exp(B)	Sig.
FP	-0.194	0.823	0.331
PA	-0.165	0.848	0.402
PED	0.497	1.644	0.048
PEDNP	0.886	2.425	0.019
Other	0.099	1.104	0.686
Constant	-0.549	0.577	0.001

Variable(s) entered on step 1: FP, PA, PED, PEDNP, Other.

In the last two logistics regression runs provider skill set categories were used as the independent variables. To see if there was anything significant in relationship to type of

provider the independent variables were changed and two more logistics regression were run. Table 17 is the model summary for logistics regression that included RVU/PP/PD goal met as the dependent variable and type of provider categories as the independent variables. The model is statistically significant and 1 % of the variation is accounted for by the equation variables.

Table 17

Model Summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1626.469	0.007	0.010

Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

In the first logistics regression run with type of provider categories as the independent variable contract was selected as the reference category because it is the type of provider category that accounts for the largest percentage of primary care provider months in the analysis. There is one independent variable in Table 18 that is statistically significant at an alpha of .05. The variable that is statistically significant is civil service at .008. Each GS lends to an 82% increase in the likelihood of meeting the RVU/PP/PD goal.

Table 18

Variables in the Equation

	B	Exp(B)	Sig.
Military	0.093	1.098	0.558
Civil Service (GS)	0.599	1.820	0.008
Borrowed Military Man Power (BMM)	0.271	1.312	0.057
Constant	-0.724	0.485	0.000

Variable(s) entered on step 1: Military, Civil Service, Borrowed Military Man Power.

In the second run contract was replaced with military as the reference category. Military was chosen as the reference category in this logistic regression run because it is a type of provider that falls in a middle category when considering the percentage of primary care provider

months in the analysis. There are two independent variables in Table 18 that are statistically significant at an alpha of .05. There is one independent variable in Table 19 that is statistically significant at an alpha of .05. The variable that is statistically significant is civil service at .037. Each GS lends to a 66% increase in the likelihood of meeting the RVU/PP/PD goal.

Table 19

Variables in the Equation

	B	Exp(B)	Sig.
Civil Service (GS)	0.506	1.658	0.037
Borrowed Military Man Power (BMM)	0.178	1.195	0.293
Contracted	-0.093	0.911	0.558
Constant	-0.631	0.532	0.000

Variable(s) entered on step 1: Civil Service, Borrowed Military Man Power, Contracted.

Means, Frequencies and Percentages

A closer look at the RVU/PP/PD by MEPRS is shown in Table 20. The quantities in the column titled N is the number of primary care provider months that each corresponding MEPRS row had during FY06 and the column titled mean is the amount of N that attained the Army goal of 15.4 RVU/PP/PD. BDAJ had the highest rate of primary care provider months that met or exceeded the Army goal of the eight MEPRS in the analysis. Of 32 primary care provider months BDAJ had 24 that met or exceeded the Army goal. BDAT had the lowest rate of primary care provider months that met or exceeded the Army goal. Of 20 primary care provider months BDAT had one that met or exceeded the Army goal. In comparison to the total mean for the data set; four MEPRS exceeded the mean, one equaled mean and three fell short of the mean.

Table 20

RVU/PP/PD Goal met Rate per MEPRS

	Mean	N	Frequency
BDAJ (BHC PEDS)	0.75	32	24
BDAT (COVE PEDS)	0.05	20	1
BDAV (TMHC PEDS)	0.63	83	52
BGAA (FMRC)	0.42	118	49
BGAE (COVE ADULT)	0.21	61	13
BGAJ (BHC ADULT)	0.36	282	101
BGAN (MHC)	0.46	312	145
BGAV (TMHC ADULT)	0.19	344	65
Total	0.36	1252	450

Provider skill set in relationship to meeting the RVU/PP/PD Army goal of 15.4 is shown in Table 21. Pediatric primary care providers and pediatric nurse practitioner primary care providers had the highest means of primary care providers in the analysis they exceeded the overall mean by .13 and .22, respectively. The sum of N for both pediatric primary care providers and pediatric nurse practitioner primary care providers is 151 and has little impact on the overall mean because it accounts for only 12.07% of the 1252 primary care provider months in the analysis (Table 8). There was no significant difference in the total mean and the mean of family practice, physician assistant, family nurse practitioner and other.

Table 21

RVU/PP/PD Goal met by Provider Skill Set

	Mean	N	Frequency
Family Practice	0.32	388	125
Physician Assistant	0.33	429	141
Family Nurse Practitioner	0.37	153	56
Pediatrics	0.49	115	56

Table 21 (continued)

	Mean	N	Frequency
Pediatrics Nurse Practitioner	0.58	36	21
Other	0.39	131	51
Total	0.36	1252	450

Type of provider in relationship to meeting the RVU/PP/PD Army goal of 15.4 is shown in table 22. GS had the highest mean among the four different types of providers. GS exceeded the overall mean by .11. The N for GS is 96 and has little impact on the overall mean because it accounts for only 7.67% of the 1252 primary care provider months in the analysis (Table 9). No significant difference in the total mean and the mean of military, contracted and BMM.

Table 22

RVU/PP/PD Goal met by Type of Provider

	Mean	N	Frequency
Military	0.35	262	91
Civil Service (GS)	0.47	96	45
Contracted	0.33	539	180
Borrowed Military Man Power (BMM)	0.39	355	138
Total	0.36	1252	450

A cross tabulation of the independent variables from Tables 21 and 22 were run to see if there was anything significant when the type of provider and provider skill set were taken into consideration together (Table 23). There were five combinations that exceeded the total mean of .36 by .10. These combinations were contract pediatric nurse practitioner, GS physician assistants, GS family practice, contract pediatrics and contract other. Their means were .58, .55, .49, .49 and .46, respectively. There were three combinations that fell short of the total mean by .10. These combinations were contract family practice, military physician assistant and contract physician assistant. There means were .27, .15, and .27, respectively.

Table 23

RVU/PP/PD Goal met by Cross Tabulation of Type of Provider and Provider Skill Set

		Mil	Percent	GS	Percent	Contract	Percent	BMM	Percent
Fam Prac	MET	49	0.34	25	0.49	51	0.27	0	0.00
	NOT MET	96	0.66	26	0.51	139	0.73	2	1.00
	Total	145	1.00	51	1.00	190	1.00	2	1.00
Phys Assist	MET	1	0.20	17	0.55	17	0.14	106	0.39
	NOT MET	4	0.80	14	0.45	106	0.86	164	0.61
	Total	5	1.00	31	1.00	123	1.00	270	1.00
Fam Nur Pract	MET	33	0.37	3	0.23	20	0.39	0	0.00
	NOT MET	56	0.63	10	0.77	31	0.61	0	0.00
	Total	89	1.00	13	1.00	51	1.00	0	0.00
Peds	MET	0	0.00	0	0.00	56	0.49	0	0.00
	NOT MET	0	0.00	0	0.00	59	0.51	0	0.00
	Total	0	0.00	0	0.00	115	1.00	0	0.00
Peds Nur Pract	MET	0	0.00	0	0.00	21	0.58	0	0.00
	NOT MET	0	0.00	0	0.00	15	0.42	0	0.00
	Total	0	0.00	0	0.00	36	1.00	0	0.00
Other	MET	8	0.35	0	0.00	11	0.46	32	0.39
	NOT MET	15	0.65	1	100.00	13	0.54	51	0.61
	Total	23	1.00	1	1.00	24	1.00	83	1.00

The number of encounters among the 1252 primary care provider months for FY06 range from 0 to 521. In Table 24 the primary care provider months fall into one of five categories. The lowest quantity category of encounters accounted for the largest percentage (39.54%) of primary care provider months. The distribution signifies that the higher the encounter quantity category the fewer the primary care provider months that attained that level of outcome.

Table 24

Primary Care Provider Month Encounters

	Frequency	Percent	Cumulative Percent
0-100	495	39.54	39.54
101-200	270	21.57	61.10
201-300	217	17.33	78.43

Table 24 (continued)

	Frequency	Percent	Cumulative Percent
301-400	222	17.73	96.17
401-521	48	3.83	100.00
Total	1252	100.00	

Encounters in relationship to meeting the RVU/PP/PD Army goal of 15.4 is shown in Table 25. Primary care provider months that had encounter categories in the two highest quantity categories were more likely to meet the 15.4 RVU/PP/PD. The two highest quantity categories had means of .52 and .54, respectively. Though these two categories did better than the others they only accounted for a combined 21.56% of the primary care provider months (Table 24).

Table 25

RVU/PP/PD Goal met by Encounter Quantity Category

	Mean	N	Frequency
0-100	0.27	495	133
101-200	0.38	270	103
201-300	0.34	217	73
301-400	0.52	222	115
401-427.85	0.54	48	26
Total	0.36	1252	450

The total RVUs among the 1252 primary care provider months for FY06 range from 0 to 427.85. In Table 26 the primary care provider months fall into one of the five quantity categories. The lowest quantity category of total RVUs accounted for the largest percentage (50.24%) of primary care provider months. The distribution signifies that the higher the total RVUs category the fewer the primary care provider months that attained that level of outcome.

Table 26

Primary Care Provider Month Total RVUs

	Frequency	Percent	Cumulative Percent
0-100	629	50.24	50.24
101-200	277	22.12	72.36
201-300	273	21.81	94.17
301-400	64	5.11	99.28
401-427.85	9	0.72	100.00
Total	1252	100.00	

Total RVUs in relationship to meeting the RVU/PP/PD Army goal of 15.4 is shown in Table 27. Primary care provider months that had total RVUs in the 301-400 category had a mean of .91. The other four categories had means that were less than half of the 301-400 category. Though this category did better than the other four it only accounted for 5.11% of the 1252 primary care provider months (Table 26). Primary care provider months that exceeded 400 dropped to a mean of .44. This shows a point of diminishing returns once providers exceed RVU totals of 400. The results are not significant though because this category only accounts for nine (.72%) of the 1252 primary care provider months in the data set.

Table 27

RVU/PP/PD Goal met by Total RVU Category

	Mean	N	Frequency
0-100	0.28	629	175
101-200	0.35	277	96
201-300	0.43	273	117
301-400	0.91	64	58
401-427.85	0.44	9	4
Total	0.36	1252	450

The FTEs among the 1252 primary care provider months for FY06 range from 0 to 1.26. An FTE for a provider is calculated by dividing the total number of actual clinical hours by 168 (8 hour day x 21 work days in the average month). In Table 28 the primary care provider months are in one of the five quantity categories. Primary care providers who are full time employees and are not filling an administrative role of some sort should be in the .8-1.0 FTE category.

Table 28

Primary Care Provider Month FTEs

	Frequency	Percent	Cumulative Percent
.0-.1	128	10.22	10.22
.2-.4	77	6.15	16.37
.5-.7	54	4.31	20.69
.8-1.0	961	76.76	97.44
1.1-1.26	32	2.56	100.00
Total	1252	100.00	

Table 28 indicates that 76.76% of the 1252 primary care provider months in the data set were a .8-1.0 FTE. Primary care provider months that fell into the 1.1 and higher FTE category worked in excess of 168 clinic hours in a particular month. The .0-.1 FTE category accounted for 10.22% of the primary care provider months. The 10.22% could be a result of clinic hours being improperly reported into UCAPERS or the primary care provider was absent a majority of the month because of leave, training, and/or etc. Primary care provider months that are BMM also lend to very low FTEs

Full time equivalents (FTEs) in relationship to meeting the RVU/PP/PD Army goal of 15.4 are shown in Table 29. Primary care provider months that were in the .5-.7 FTE category were the most successful category in attaining the RVU/PP/PD Army goal. The .5-.7 FTE category had a mean of .52. The .8-1.0 FTE category that accounted for 76.76% of our primary

care provider months had a mean of .39 on attaining the 15.4 RVU/PP/PD Army goal. This drop could be attributed to not reporting clinic hours accurately, less encounters and lower RVUs per visit rate. The 1.1 and higher FTE category had one of the 32 primary care provider months meet the productivity goal. This is likely a result of inaccurately reporting hours or a testament that clinic hour exceeding a full 1.0 FTE does not equate to increased productivity.

Table 29

RVU/PP/PD Goal met by FTE Category

	Mean	N	Frequency
.0-.1	0.10	128	13
.2-.4	0.44	77	34
.5-.7	0.52	54	28
.8-1.0	0.39	961	374
1.1-1.26	0.03	32	1
Total	0.36	1252	450

Discussion and Recommendations

The data used for the analysis was collected from UCAPERS and M2 on eight DFCM MEPRS. A total of 1252 primary care provider months make up the FY06 data set. The skill set of the primary care providers that make up these 1252 primary care provider months are family practice, physician assistant, family nurse practitioner, pediatrics, pediatrics nurse practitioner and other, and their means of employment is either military, GS, contract or BMM. There were 186 primary care providers that accounted for the 1252 primary care provider months.

A very conservative approach was used when estimating the outliers in the data set. One standard deviation from the 15.4 RVU/PP/PD was considered normal and all others as outliers. One standard deviation encompassed primary care provider months that had RVU/PP/PD that ranged from 8.8 to 22 (Table 12) all others were referred to as outliers. The outliers accounted

for 399 of the 1252 primary care provider months of which 105 of them had RVU/PP/PD as low as 0-0.1. The vast amount of outliers shows that there is a data quality issue and that the data lacks both reliability and validity.

A logistics regression on primary care provider skill set revealed that pediatric primary care providers and pediatric nurse practitioner primary care providers had the greatest likelihood of meeting the RVU/PP/PD goal of the six primary care provider skill sets. Reasons that potentially led to pediatric primary care providers and pediatric nurse practitioner primary care providers having a higher rate of meeting the RVU/PP/PD goal could be attributed to they are all contract employees, they may be more accurate in reporting clinic hours into UCAPERS and their RVU mean weight per pediatric patient visit is higher than that of an adult patient visit. As a contract employee of CRDAMC you are more likely to be fully engaged in providing care and less likely to be engaged in administrative duties that should lend to higher productivity. The 15.4 RVU/PP/PD Army goal had a met goal mean of .36 in the 1252 lines of primary care provider months. Pediatric primary care providers and pediatric nurse practitioner primary care providers had means of .49 and .58, respectively in meeting the 15.4 RVU/PP/PD Army goal. Their combined frequency (n=151) in the data set only accounted for 12.07% of the primary care provider months so their means had little impact on the overall mean of the 1252 line data set.

A logistics regression on primary care provider type revealed that civil service (GS) employees had the greatest likelihood of meeting the RVU/PP/PD goal of the four primary care provider types. Reasons that potentially led to GS providers having a higher rate of meeting the RVU/PP/PD goal could be attributed to their being more accurate in reporting hours into UCAPERS and on average they have a longer tenure at CRDAMC then their fellow military, contract and BMM co-workers. GS longer tenure likely results in more productivity because

they are more familiar with systems and procedures and they have worked with clinic support staff longer. The 15.4 RVU/PP/PD Army goal had a met goal mean of .36 in the 1252 lines of primary care provider months. Civil service primary care providers had a mean of .47 in meeting the 15.4 RVU/PP/PD Army goal. Civil service primary care provider frequency (n=96) in the data set only accounted for 7.67% of the primary care provider months so their productivity means had little impact on the overall mean of the 1252 line data set.

A cross tabulation of the independent variables provider skill set and provider type were run to see if there was anything significant. There were five combinations that exceeded the total mean of .36 by .10. These combinations were contract pediatric nurse practitioner, GS physician assistants, GS family practice, contract pediatrics and contract other. Their means were .58, .55, .49, .49 and .46, respectively.

Only 36% of the 1252 primary care provider months met the RVU/PP/PD goal. Through speaking with DFCM primary care providers and administrators about issues that contributed to not meeting the RVU/PP/PD goal many responded AHLTA. The new outpatient electronic medical record AHLTA which is capable of storing information on millions of patients, enterprise wide, was fielded at CRDAMC June – September of 2005. Since AHLTAs implementation patient appointments per primary care provider per day has scaled back from 24 patients to 20 a day. Inevitably the hope is that AHLTAs benefits will out weigh its liabilities. Benefits of AHLTA are: the ability to provide a primary care provider with a patient's medical history and test results (i.e. lab and xray) in a matter of a few key strokes; the capability to see a patient's medical history and test results at a AHLTA equipped MTF or clinic thousands of miles away without having to see a paper medical record or in some circumstances without even seeing the patient; the management tools AHLTA has allows providers and administrative personnel the

capability analyze searchable data that could be detrimental in the organizations strategic planning. The liability is that it takes longer to finish a patient encounter because of the interaction required to input information during and after a patient encounter.

Primary care providers in the DFCM have complained that AHLTA is slow in calling up and storing patient data, and moving between screens. Periodically AHLTA requires software upgrades. Primary care providers and information management personnel hope that these system upgrades would make the system more efficient. The most recent software upgrade to AHLTA which took four days was completed on April 09, 2007. On April 10, 2007, COL Larsen, CRDAMC Deputy Commander of Clinical Services stated "feedback from primary care providers on the recent AHLTA upgrade was that it took even longer to move between screens and that processing time per encounter had increased."

Literature published in Stars & Strips on April 13, 2006 addressed AHLTA. The article is titled "New medical records system a headache for doctors". The issues that are mentioned in the article are consistent with those at CRDAMC. Lt Col Viernes, a dermatology chairman, at Lackland Air Force Base in San Antonio said that since the implementation of AHLTA their monthly patient average fell from 1,800 to below 1,200. Col Sheridan from Brooke Army Medical Center in San Antonio said their patient appointments per provider fell from 21 a day to 18. This drop per primary care provider resulted in a drop of 120 available appointments a day at Brooke's three primary care clinics. Dr. Michael Nelson, a civilian pediatrician at Naval Medical Center San Diego, said that instead of four patients an hour he now can see only three because AHLTA is so slow to accept data. "It takes on average two to four times more time to document in AHLTA than it did when we used paper", Nelson said (Philpott, 2006).

Additionally, a problem that became very evident during the analysis was that the improper reporting of clinical hours in UCAPERS greatly contributed to there only being a 36% rate of the 1252 primary care provider months meeting the RVU/PP/PD goal. A large amount of the outliers discussed can be attributed to the improper UCAPERS reporting. The outliers who had RVU/PP/PD that fell between 0-0.1 had encounters but because their UCAPERS data was reported inaccurately they fell into this category. Department administrators collect UCAPERS data from their providers at the end of each month and have on average two days to review it before it is inputted into MEPRS. A better system needs to be adopted at CRDAMC that will assist the primary care providers in accurately reporting their hours. The current system results in primary care providers attempting to recall or guess where their hours were spent during the month.

A system called Work-hour Tracking System (WTS) currently being used by organizations such as 121 Combat Support Hospital has proven to mitigate the end of the month recalling or guessing. The WTS is UCAPERS for providers. Providers input their hours into the system daily and send weekly reports to their supervisor/administrative officers for review. If the WTS is used accurately there is no recalling or guessing at the end of the month. This system or one similar may be what is needed now to add reliability and validity to the UCAPERS reporting at CRDAMC.

Over the next couple years a database called the Defense Medical Human Resources System – internet (DMHRSi) will phase out UCAPERS. This system is a web-based Tri-Service decision support system that enables the MHS to manage medical human resources across the enterprise by allowing ready access to essential manpower, personnel, labor cost, assignment,

education and training, and personnel readiness information. The DMHRSi is the fix for CRDAMC in the long run but in the short run WTS may be the answer.

There was a shortage in primary care providers during the entire fiscal year because of this the number of exam rooms per available provider normally met the recommended two exam rooms per primary care provider. Additionally, the shortage of primary care providers resulted in a staff to provider ratio that met or exceeded the goal of 3.5:1. Due to these findings both exam rooms and staff to provider ratio were removed as variables in determining provider productivity in the analysis.

It's believed that MEPRS that have a higher no show rate have lower RVU/PP/PD. The trend appears to be that a percentage of these no show appointments are filled by walk-in patients. Walk-in patients on average are less severe and produce lower RVUs. Another issue is that primary care providers can not depend on a walk-in patient to be waiting in the waiting area to take the place of a no show. It is believed that clinics with higher walk-in appointments have lower monthly RVUs. It's expected that clinics with more primary care providers will produce more monthly RVUs than clinics that have less primary care providers because of the additional available appointments. Walk in rate and no show rate were also not used as independent variables in the analysis; a future PI project could address them.

The DFCM was already experiencing a shortage of primary care providers at its clinics. The shortage had resulted in an increased number of beneficiaries being assigned primary care managers (PCMs) in the network. The use of AHLTA has likely been a contributing factor to even more beneficiaries having to be referred to the network. Initiatives should be put in place to in the short run to fill shortages in primary care providers and in the long run to increase the number of primary care providers on the table of distribution and allowance (TDA). An increase

is required to accommodate the additional time required per patient encounter and to fulfill the much needed routine appointments our Soldiers need following 12-15 month combat deployments.

World class medical care is what Soldiers and their families deserve for the sacrifices they make every day. The electronic medical record, AHLTA, lends to improved patient care. The improved patient care is in the form of the primary care provider being capable to pull up patient medical files and history and learning of all conditions previously diagnosed, of all medicines administered, patient allergies present and more. Having this information electronically comes at an expense and that is that it takes primary care providers longer per encounter because of the time required to pull up this information and time required to document the visit. Army and MEDCOM established the current goal of 15.4 RVU/PP/PD in 2003. Since then AHLTA the electronic medical record has become the standard for the outpatient medical record. Army and MEDCOM need to revisit the RVU/PP/PD goal because it is evident that attaining 15.4 RVU/PP/PD while using AHLTA has become a hard goal to maintain.

Conclusion

This analysis was prompted because the Department of Family and Community Medicine (DFCM) experienced a decline (as of February 2006) in either meeting or exceeding the MEDCOM standard of 15.4 Relative Value Units per primary care provider per day (RVU/PP/PD). The focus was to determine if there was an independent variable or multiple independent variables that contributed to the outcome of the dependent variable primary care provider productivity in the DFCM for FY06.

Eight MEPRS from the DFCM were selected to be analyzed. Those eight MEPRS were BGAV (Thomas Moore Health Clinic Adult), BDAV (Thomas Moore Health Clinic Pediatrics),

BGAJ (Bennett Health Clinic Adult), BDAJ (Bennett Health Clinic Pediatrics), BGAA (Darnall Family Medicine Residency Center), BGAN (Monroe Health Clinic Adult), BGAE (Cove Family Care Clinic Adult) and BDAT(Cove Family Care Clinic Pediatrics). The MHS uses the RVU/PP/PD to measure its primary care provider productivity. Since 2003 the Army's goal for primary care provider productivity has been 15.4RVU/PP/PD. The DFCM did regain from the decline that started in February 06 and finished the last three months of FY06 by exceeding the 15.4 RVU/PP/PD MEDCOM goal (Appendix A).

Logistics regression was used to compare the dependent variable productivity to two of the seven independent variables independently. The independent variables used were provider skill set and type of provider. Also in the results section are many tables that provide means, frequencies and percentages in support of the logistic regression results.

The logistics regression for provider skill set showed that pediatric and pediatric nurse practitioners were significant at an alpha of .05. Each pediatric and pediatric nurse practitioner lends to a 94% and 186%, respectively increase in the likelihood of meeting the RVU/PP/PD productivity goal when physician assistant was used as the referent category. The logistics regression for type of provider showed that GS was significant at an alpha of .05. GS lends to an 82% increase in the likelihood of meeting the RVU/PP/PD productivity goal when contract was used as the referent category.

This in-depth analysis revealed that the raw data that makes up the 1252 line data set lack reliability and validity. The information technology systems UCAPERS that is resourced to populate the RVU/PP/PD formula is not being updated accurately throughout the eight MEPRS. Since the data lacks reliability and validity the results of this analysis should not be used by CRDAMC decision makers in hiring and firing employees or how they staff their clinics in the

future. This analysis would be of most benefit if used to educate leadership, primary care providers, administrators and staff on the statistical outcomes of their primary care providers, MEPR or clinic under the current data reporting protocols. Additionally, raw data could be shared with department chiefs that could develop PI projects to improve data reporting with in their departments. The educational value that could be gained is that how inadequate reporting equates to an inadequate picture of what is actually taking place at CRDAMC the MTF that supports the Army's power projection platform Fort Hood.

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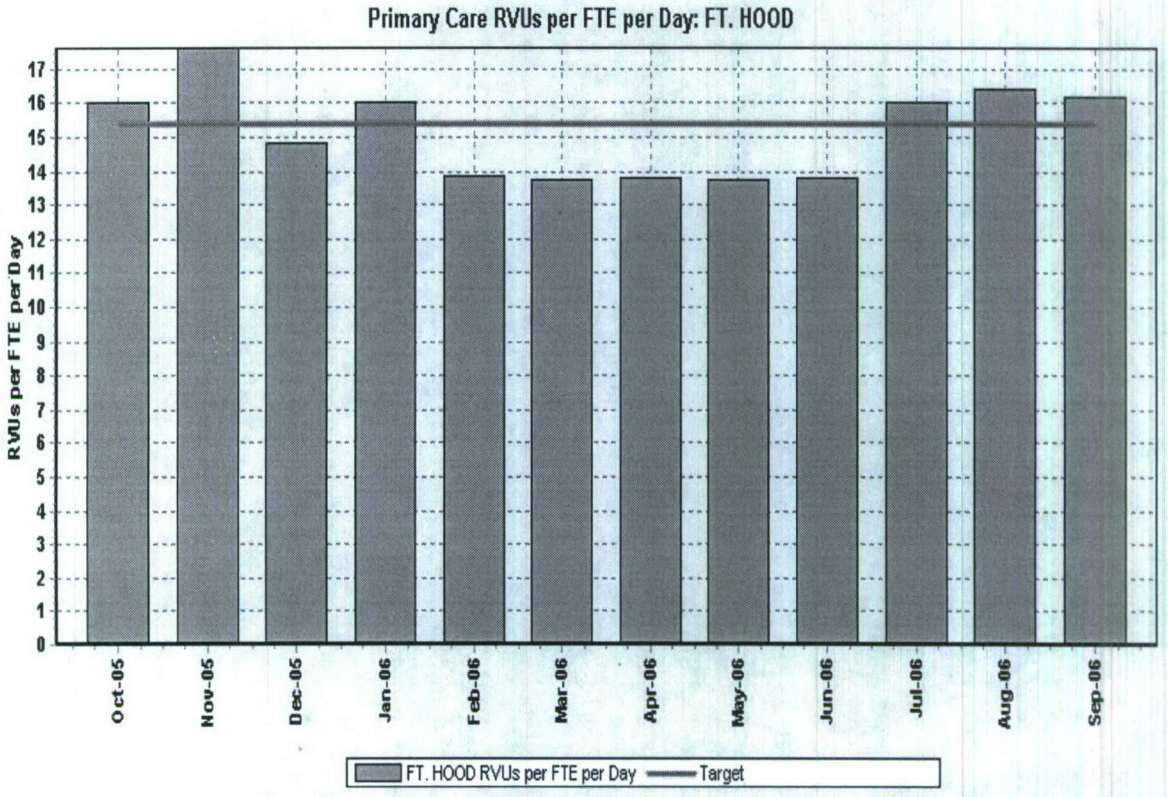
Appendix A



	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06
FT. HOOD RVUs	24,922.64	27,863.79	21,073.03	23,717.80	20,973.37	24,785.94	21,956.07	21,622.01	21,969.87	22,090.72	26,517.69	22,643.57
FT. HOOD FTEs	74.15	75.33	67.68	70.48	72.08	85.89	75.88	75.01	75.74	65.67	76.86	66.65
FT. HOOD RVUs per FTE per Day	16.01	17.61	14.83	16.02	13.86	13.74	13.78	13.73	13.81	16.02	16.43	16.18
Target	15.40	15.40	15.40	15.40	15.40	15.40	15.40	15.40	15.40	15.40	15.40	15.40

Appendix B RVU/PP/PD descriptive statistics

Prov Skill Set	Type of Prov	MEPRS	N	Minimum	Maximum	Mean	SD	Median	Range
Fam Prac	Mil	BDAJ	1	0.00	0.00	0.00	.	0.00	0.00
		BDAV	2	0.00	0.00	0.00	0.00	0.00	0.00
		BGAA	60	0.00	47.70	13.47	8.96	14.42	47.70
		BGAE	1	0.00	0.00	0.00	.	0.00	0.00
		BGAJ	30	0.00	22.43	9.55	6.90	10.67	22.43
		BGAN	21	0.00	33.32	13.75	9.74	12.09	33.32
		BGAV	30	0.00	34.94	14.45	8.94	11.63	34.94
		Total	145	0.00	47.70	12.53	8.91	11.78	47.70
	GS	BDAT	1	0.00	0.00	0.00	.	0.00	0.00
		BGAA	24	9.16	36.15	16.36	5.26	15.69	26.99
		BGAE	12	10.90	19.03	14.47	2.87	13.67	8.13
		BGAN	3	6.10	32.05	21.87	13.85	27.46	25.95
		BGAV	11	0.86	51.08	17.40	12.80	16.08	50.22
		Total	51	0.00	51.08	16.14	7.95	15.25	51.08
	Contract	BDAJ	1	0.00	0.00	0.00	.	0.00	0.00
		BGAJ	73	0.00	70.98	15.95	9.46	16.13	70.98
		BGAV	116	0.00	65.36	11.66	5.77	11.38	65.36
		Total	190	0.00	70.98	13.25	7.72	12.09	70.98
	BMM	BGAJ	2	0.00	0.00	0.00	0.00	0.00	0.00
		Total	2	0.00	0.00	0.00	0.00	0.00	0.00
	Total	BDAJ	2	0.00	0.00	0.00	0.00	0.00	0.00
		BDAT	1	0.00	0.00	0.00	.	0.00	0.00
		BDAV	2	0.00	0.00	0.00	0.00	0.00	0.00
		BGAA	84	0.00	47.70	14.30	8.15	15.03	47.70
		BGAE	13	0.00	19.03	13.36	4.87	13.55	19.03
		BGAJ	105	0.00	70.98	13.82	9.34	14.67	70.98
		BGAN	24	0.00	33.32	14.77	10.33	12.41	33.32
		BGAV	157	0.00	65.36	12.60	7.27	11.69	65.36
		Total	388	0.00	70.98	13.29	8.31	12.52	70.98
Phy Assist	Mil	BGAN	5	0.00	16.25	4.09	7.04	0.00	16.25
		Total	5	0.00	16.25	4.09	7.04	0.00	16.25
	GS	BGAJ	8	0.02	19.61	10.55	8.13	13.24	19.59
		BGAN	10	3.91	44.00	20.76	12.14	17.89	40.09
		BGAV	13	12.58	21.32	15.66	2.53	14.94	8.74
		Total	31	0.02	44.00	15.99	8.82	15.82	43.98
	Contract	BGAA	3	4.02	14.94	7.67	6.30	4.05	10.92
		BGAE	13	10.02	17.39	13.67	2.29	13.80	7.37
		BGAJ	26	0.00	15.17	7.16	4.44	8.23	15.17
		BGAN	18	3.63	57.15	14.59	11.65	10.99	53.52
		BGAV	63	3.19	19.57	12.30	3.05	12.15	16.38
		Total	123	0.00	57.15	11.58	5.95	11.50	57.15
	BMM	BGAA	3	0.00	0.00	0.00	0.00	0.00	0.00
		BGAJ	71	0.00	67.52	13.48	13.72	12.28	67.52
		BGAN	166	0.00	41.52	14.45	6.62	15.06	41.52
		BGAV	30	0.58	22.20	9.49	4.49	9.91	21.62

		Total	270	0.00	67.52	13.49	9.08	13.49	67.52
	Total	BGAA	6	0.00	14.94	3.84	5.79	2.01	14.94
		BGAE	13	10.02	17.39	13.67	2.29	13.80	7.37
		BGAJ	105	0.00	67.52	11.70	11.97	9.38	67.52
		BGAN	199	0.00	57.15	14.52	7.78	14.97	57.15
		BGAV	106	0.58	22.20	11.92	3.91	12.08	21.62
		Total	429	0.00	67.52	13.01	8.37	13.01	67.52
Fam Nur Pract	Mil	BDAV	1	0.00	0.00	0.00	.	0.00	0.00
		BGAA	16	0.00	28.60	15.80	8.17	17.34	28.60
		BGAE	2	8.29	25.68	16.99	12.30	16.99	17.39
		BGAJ	27	0.00	137.62	29.22	37.09	14.45	137.62
		BGAN	12	0.47	108.28	24.23	28.19	21.19	107.81
		BGAV	31	4.06	21.56	10.71	3.71	11.29	17.50
		Total	89	0.00	137.62	19.08	24.28	12.03	137.62
	GS	BGAA	1	0.00	0.00	0.00	.	0.00	0.00
		BGAJ	12	5.78	18.77	12.77	3.48	12.41	12.99
		Total	13	0.00	18.77	11.79	4.86	12.13	18.77
	Contract	BDAT	2	0.00	0.00	0.00	0.00	0.00	0.00
		BGAE	24	0.00	17.41	12.05	5.67	13.86	17.41
		BGAJ	3	0.00	17.60	9.64	8.92	11.33	17.60
		BGAV	22	0.00	20.93	14.96	4.03	15.82	20.93
		Total	51	0.00	20.93	12.69	5.85	14.82	20.93
	Total	BDAT	2	0.00	0.00	0.00	0.00	0.00	0.00
		BDAV	1	0.00	0.00	0.00	.	0.00	0.00
		BGAA	17	0.00	28.60	14.87	8.79	16.79	28.60
		BGAE	26	0.00	25.68	12.43	6.12	13.86	25.68
		BGAJ	42	0.00	137.62	23.12	30.80	12.89	137.62
		BGAN	12	0.47	108.28	24.23	28.19	21.19	107.81
		BGAV	53	0.00	21.56	12.47	4.36	13.12	21.56
		Total	153	0.00	137.62	16.33	19.11	13.56	137.62
Peds	Contract	BDAJ	25	0.00	39.62	18.66	6.91	19.08	39.62
		BDAT	17	0.00	21.87	11.51	5.96	13.14	21.87
		BDAV	57	0.00	21.89	15.50	3.78	16.18	21.89
		BGAE	9	0.00	9.49	5.74	3.27	6.94	9.49
		BGAJ	5	0.00	9.31	1.86	4.16	0.00	9.31
		BGAV	2	0.00	0.00	0.00	0.00	0.00	0.00
		Total	115	0.00	39.62	13.97	6.75	15.16	39.62
	Total	BDAJ	25	0.00	39.62	18.66	6.91	19.08	39.62
		BDAT	17	0.00	21.87	11.51	5.96	13.14	21.87
		BDAV	57	0.00	21.89	15.50	3.78	16.18	21.89
		BGAE	9	0.00	9.49	5.74	3.27	6.94	9.49
		BGAJ	5	0.00	9.31	1.86	4.16	0.00	9.31
		BGAV	2	0.00	0.00	0.00	0.00	0.00	0.00
		Total	115	0.00	39.62	13.97	6.75	15.16	39.62
Peds Nur Pract	Contract	BDAJ	5	13.26	21.72	17.48	3.11	18.04	8.46
		BDAV	23	9.65	26.00	17.01	3.26	17.14	16.35
		BGAJ	2	0.01	0.03	0.02	0.01	0.02	0.02

		BGAV	6	0.39	13.24	5.72	4.32	4.70	12.85
		Total	36	0.01	26.00	14.25	6.40	16.32	25.99
	Total	BDAJ	5	13.26	21.72	17.48	3.11	18.04	8.46
		BDAV	23	9.65	26.00	17.01	3.26	17.14	16.35
		BGAJ	2	0.01	0.03	0.02	0.01	0.02	0.02
		BGAV	6	0.39	13.24	5.72	4.32	4.70	12.85
		Total	36	0.01	26.00	14.25	6.40	16.32	25.99
Other	Mil	BGAA	10	0.00	30.61	7.30	9.86	2.91	30.61
		BGAJ	3	0.35	13.16	8.01	6.76	10.51	12.81
		BGAN	10	0.00	25.84	15.86	9.30	18.82	25.84
		Total	23	0.00	30.61	11.11	9.87	10.51	30.61
	GS	BGAV	1	0.00	0.00	0.00	.	0.00	0.00
		Total	1	0.00	0.00	0.00	.	0.00	0.00
	Contract	BGAJ	4	0.00	21.67	11.90	9.62	12.97	21.67
		BGAN	1	0.00	0.00	0.00	.	0.00	0.00
		BGAV	19	0.00	125.42	18.52	26.57	14.05	125.42
		Total	24	0.00	125.42	16.65	24.15	13.82	125.42
	BMM	BGAA	1	0.00	0.00	0.00	.	0.00	0.00
		BGAJ	16	0.38	31.24	8.61	7.70	6.16	30.86
		BGAN	66	0.00	22.33	13.15	5.97	14.73	22.33
		Total	83	0.00	31.24	12.12	6.64	14.37	31.24
	Total	BGAA	11	0.00	30.61	6.64	9.61	2.46	30.61
		BGAJ	23	0.00	31.24	9.10	7.68	7.84	31.24
		BGAN	77	0.00	25.84	13.33	6.63	14.79	25.84
		BGAV	20	0.00	125.42	17.60	26.19	13.82	125.42
		Total	131	0.00	125.42	12.68	12.34	13.53	125.42
Total	Mil	BDAJ	1	0.00	0.00	0.00	.	0.00	0.00
		BDAV	3	0.00	0.00	0.00	0.00	0.00	0.00
		BGAA	86	0.00	47.70	13.19	9.12	13.63	47.70
		BGAE	3	0.00	25.68	11.32	13.11	8.29	25.68
		BGAJ	60	0.00	137.62	18.32	27.02	11.13	137.62
		BGAN	48	0.00	108.28	15.80	16.78	14.38	108.28
		BGAV	61	0.00	34.94	12.55	7.00	11.38	34.94
		Total	262	0.00	137.62	14.47	16.24	11.86	137.62
	GS	BDAT	1	0.00	0.00	0.00	.	0.00	0.00
		BGAA	25	0.00	36.15	15.71	6.10	15.62	36.15
		BGAE	12	10.90	19.03	14.47	2.87	13.67	8.13
		BGAJ	20	0.02	19.61	11.89	5.71	12.41	19.59
		BGAN	13	3.91	44.00	21.02	11.95	19.02	40.09
		BGAV	25	0.00	51.08	15.80	9.11	14.94	51.08
		Total	96	0.00	51.08	15.34	8.09	14.92	51.08
	Contract	BDAJ	31	0.00	39.62	17.87	7.12	18.78	39.62
		BDAT	19	0.00	21.87	10.30	6.69	12.95	21.87
		BDAV	80	0.00	26.00	15.93	3.68	16.55	26.00
		BGAA	3	4.02	14.94	7.67	6.30	4.05	10.92
		BGAE	46	0.00	17.41	11.28	5.28	13.39	17.41
		BGAJ	113	0.00	70.98	12.71	9.42	12.88	70.98
		BGAN	19	0.00	57.15	13.82	11.80	10.80	57.15
		BGAV	228	0.00	125.42	12.47	9.16	11.93	125.42

	Total	539	0.00	125.42	13.19	8.41	13.20	125.42
BMM	BGAA	4	0.00	0.00	0.00	0.00	0.00	0.00
	BGAJ	89	0.00	67.52	12.31	12.92	9.19	67.52
	BGAN	232	0.00	41.52	14.08	6.45	14.93	41.52
	BGAV	30	0.58	22.20	9.49	4.49	9.91	21.62
	Total	355	0.00	67.52	13.09	8.61	13.52	67.52
Total	BDAJ	32	0.00	39.62	17.31	7.68	18.76	39.62
	BDAT	20	0.00	21.87	9.78	6.91	12.81	21.87
	BDAV	83	0.00	26.00	15.36	4.69	16.41	26.00
	BGAA	118	0.00	47.70	13.13	8.77	14.22	47.70
	BGAE	61	0.00	25.68	11.91	5.45	13.47	25.68
	BGAJ	282	0.00	137.62	13.72	15.78	11.45	137.62
	BGAN	312	0.00	108.28	14.62	9.45	14.73	108.28
	BGAV	344	0.00	125.42	12.47	8.55	11.91	125.42
	Total	1252	0.00	137.62	13.59	10.58	13.30	137.62

Appendix C Total RVU per provider descriptive statistics

Prov Skill Set	Type of Prov	MEPRS	N	Mean	Minimum	Maximum	SD	Median	Range
Fam Prac	Mil	BDAJ	1	3.54	3.54	3.54	.	3.54	0.00
		BDAV	2	2.00	1.10	2.89	1.27	2.00	1.79
		BGAA	60	56.91	0.22	144.12	48.26	44.10	143.90
		BGAE	1	4.69	4.69	4.69	.	4.69	0.00
		BGAJ	30	82.89	0.22	227.07	71.32	82.76	226.85
		BGAN	21	73.87	1.79	258.52	76.47	54.62	256.73
		BGAV	30	78.96	6.03	211.60	58.79	57.01	205.57
		Total	145	67.82	0.22	258.52	61.08	51.41	258.30
	GS	BDAT	1	2.44	2.44	2.44	.	2.44	0.00
		BGAA	24	86.12	41.23	152.07	34.77	70.55	110.84
		BGAE	12	248.88	216.26	318.78	27.00	246.78	102.52
		BGAN	3	77.13	3.05	156.25	76.72	72.09	153.20
		BGAV	11	161.67	1.18	269.37	89.37	202.54	268.19
		Total	51	138.54	1.18	318.78	86.63	124.96	317.60
	Contract	BDAJ	1	1.79	1.79	1.79	.	1.79	0.00
		BGAJ	73	204.90	0.68	427.85	113.57	218.43	427.17
		BGAV	116	161.88	6.73	296.50	75.95	157.55	289.77
		Total	190	177.56	0.68	427.85	95.01	187.35	427.17
	BMM	BGAJ	2	1.53	0.46	2.59	1.51	1.53	2.13
		Total	2	1.53	0.46	2.59	1.51	1.53	2.13
	Total	BDAJ	2	2.67	1.79	3.54	1.24	2.67	1.75
		BDAT	1	2.44	2.44	2.44	.	2.44	0.00
		BDAV	2	2.00	1.10	2.89	1.27	2.00	1.79
		BGAA	84	65.25	0.22	152.07	46.55	64.63	151.85
		BGAE	13	230.09	4.69	318.78	72.49	244.86	314.09
		BGAJ	105	166.16	0.22	427.85	117.99	182.65	427.63
		BGAN	24	74.28	1.79	258.52	74.82	57.55	256.73
		BGAV	157	146.02	1.18	296.50	80.47	139.13	295.32
		Total	388	130.51	0.22	427.85	97.06	113.99	427.63
Phy Assist	Mil	BGAN	5	64.17	0.84	175.31	68.97	46.73	174.47
		Total	5	64.17	0.84	175.31	68.97	46.73	174.47
	GS	BGAJ	8	124.75	0.17	284.94	131.93	92.96	284.77
		BGAN	10	65.68	1.35	135.77	40.59	64.40	134.42
		BGAV	13	193.64	10.66	269.18	67.41	203.78	258.52
		Total	31	134.58	0.17	284.94	97.43	135.77	284.77
	Contract	BGAA	3	11.25	10.05	13.07	1.60	10.62	3.02
		BGAE	13	207.16	48.79	279.53	63.95	225.55	230.74
		BGAJ	26	37.73	0.66	216.40	58.31	9.50	215.74
		BGAN	18	87.77	3.60	250.51	80.37	61.25	246.91
		BGAV	63	189.13	24.12	298.43	66.35	207.80	274.31
		Total	123	139.86	0.66	298.43	94.88	175.74	297.77
	BMM	BGAA	3	0.82	0.46	1.33	0.46	0.66	0.87
		BGAJ	71	63.28	0.23	263.67	67.48	40.31	263.44
		BGAN	166	77.78	1.46	267.62	58.21	61.90	266.16
		BGAV	30	98.12	1.15	266.38	66.29	87.42	265.23
		Total	270	75.37	0.23	267.62	62.44	58.31	267.39
	Total	BGAA	6	6.03	0.46	13.07	5.81	5.69	12.61
		BGAE	13	207.16	48.79	279.53	63.95	225.55	230.74
		BGAJ	105	61.64	0.17	284.94	74.19	28.74	284.77
		BGAN	199	77.74	0.84	267.62	59.76	61.34	266.78
		BGAV	106	163.92	1.15	298.43	77.85	191.93	297.28
		Total	429	98.01	0.17	298.43	81.63	75.47	298.26
Fam Nur	Mil	BDAV	1	1.55	1.55	1.55	.	1.55	0.00

Pract									
		BGAA	16	120.38	1.91	218.06	64.40	131.24	216.15
		BGAE	2	3.16	3.11	3.21	0.07	3.16	0.10
		BGAJ	27	29.93	0.85	172.02	37.13	15.05	171.17
		BGAN	12	20.61	2.59	53.82	17.26	13.81	51.23
		BGAV	31	109.82	3.32	231.88	76.11	116.64	228.56
		Total	89	71.84	0.85	231.88	71.57	45.77	231.03
	GS	BGAA	1	1.65	1.65	1.65	.	1.65	0.00
		BGAJ	12	190.20	122.91	297.84	56.47	195.07	174.93
		Total	13	175.69	1.65	297.84	75.22	190.48	296.19
	Contract	BDAT	2	1.12	0.67	1.56	0.63	1.12	0.89
		BGAE	24	252.11	157.53	332.99	40.95	249.35	175.46
		BGAJ	3	4.97	4.05	6.60	1.42	4.25	2.55
		BGAV	22	235.62	35.23	334.69	75.19	254.11	299.46
		Total	51	220.62	0.67	334.69	91.86	246.30	334.02
	Total	BDAT	2	1.12	0.67	1.56	0.63	1.12	0.89
		BDAV	1	1.55	1.55	1.55	.	1.55	0.00
		BGAA	17	113.40	1.65	218.06	68.68	125.65	216.41
		BGAE	26	232.96	3.11	332.99	78.23	247.42	329.88
		BGAJ	42	73.94	0.85	297.84	85.49	39.15	296.99
		BGAN	12	20.61	2.59	53.82	17.26	13.81	51.23
		BGAV	53	162.04	3.32	334.69	97.68	158.13	331.37
		Total	153	130.26	0.67	334.69	105.37	126.68	334.02
Peds	Contract	BDAJ	25	276.75	0.00	399.07	81.45	290.34	399.07
		BDAT	17	139.95	4.54	266.14	95.85	147.22	261.60
		BDAV	57	236.70	0.00	394.14	105.27	269.45	394.14
		BGAE	9	2.45	0.57	5.41	1.67	3.04	4.84
		BGAJ	5	15.21	2.36	34.91	16.83	4.02	32.55
		BGAV	2	0.78	0.44	1.11	0.47	0.78	0.67
		Total	115	199.04	0.00	399.07	126.16	240.09	399.07
	Total	BDAJ	25	276.75	0.00	399.07	81.45	290.34	399.07
		BDAT	17	139.95	4.54	266.14	95.85	147.22	261.60
		BDAV	57	236.70	0.00	394.14	105.27	269.45	394.14
		BGAE	9	2.45	0.57	5.41	1.67	3.04	4.84
		BGAJ	5	15.21	2.36	34.91	16.83	4.02	32.55
		BGAV	2	0.78	0.44	1.11	0.47	0.78	0.67
		Total	115	199.04	0.00	399.07	126.16	240.09	399.07
Peds Nur Pract	Contract	BDAJ	5	255.45	187.19	366.46	67.96	251.60	179.27
		BDAV	23	250.75	47.05	350.84	74.00	272.20	303.79
		BGAJ	2	0.39	0.23	0.55	0.23	0.39	0.32
		BGAV	6	2.47	0.92	3.31	0.97	2.90	2.39
		Total	36	196.11	0.23	366.46	122.69	251.13	366.23
	Total	BDAJ	5	255.45	187.19	366.46	67.96	251.60	179.27
		BDAV	23	250.75	47.05	350.84	74.00	272.20	303.79
		BGAJ	2	0.39	0.23	0.55	0.23	0.39	0.32
		BGAV	6	2.47	0.92	3.31	0.97	2.90	2.39
		Total	36	196.11	0.23	366.46	122.69	251.13	366.23
Other	Mil	BGAA	10	33.01	1.57	106.32	39.21	14.70	104.75
		BGAJ	3	53.12	4.26	95.91	46.13	59.20	91.65
		BGAN	10	15.62	0.00	50.68	16.02	11.01	50.68
		Total	23	28.07	0.00	106.32	33.08	12.32	106.32
	GS	BGAV	1	10.32	10.32	10.32	.	10.32	0.00
		Total	1	10.32	10.32	10.32	.	10.32	0.00
	Contract	BGAJ	4	100.42	27.67	238.47	98.27	67.77	210.80
		BGAN	1	15.69	15.69	15.69	.	15.69	0.00
		BGAV	19	221.52	0.90	365.56	113.13	232.37	364.66

		Total	24	192.76	0.90	365.56	121.67	226.16	364.66
	BMM	BGAA	1	37.87	37.87	37.87	.	37.87	0.00
		BGAJ	16	51.19	0.71	174.78	45.12	42.26	174.07
		BGAN	66	93.53	0.00	259.96	64.57	89.39	259.96
		Total	83	84.70	0.00	259.96	63.14	74.83	259.96
	Total	BGAA	11	33.45	1.57	106.32	37.23	19.35	104.75
		BGAJ	23	60.00	0.71	238.47	57.08	43.16	237.76
		BGAN	77	82.40	0.00	259.96	65.95	74.83	259.96
		BGAV	20	210.96	0.90	365.56	119.81	229.48	364.66
		Total	131	93.98	0.00	365.56	89.43	73.63	365.56
Total	Mil	BDAJ	1	3.54	3.54	3.54	.	3.54	0.00
		BDAV	3	1.85	1.10	2.89	0.93	1.55	1.79
		BGAA	86	65.94	0.22	218.06	57.04	63.32	217.84
		BGAE	3	3.67	3.11	4.69	0.88	3.21	1.58
		BGAJ	60	57.57	0.22	227.07	62.10	42.85	226.85
		BGAN	48	47.41	0.00	258.52	61.26	19.17	258.52
		BGAV	61	94.64	3.32	231.88	69.34	83.74	228.56
		Total	262	65.62	0.00	258.52	63.96	46.77	258.52
	GS	BDAT	1	2.44	2.44	2.44	.	2.44	0.00
		BGAA	25	82.74	1.65	152.07	38.00	68.81	150.42
		BGAE	12	248.88	216.26	318.78	27.00	246.78	102.52
		BGAJ	20	164.02	0.17	297.84	96.65	182.15	297.67
		BGAN	13	68.32	1.35	156.25	47.35	72.09	154.90
		BGAV	25	172.24	1.18	269.37	83.62	202.61	268.19
		Total	96	140.96	0.17	318.78	89.57	137.45	318.61
	Contract	BDAJ	31	264.45	0.00	399.07	91.44	276.35	399.07
		BDAT	19	125.34	0.67	266.14	100.41	146.94	265.47
		BDAV	80	240.74	0.00	394.14	97.06	269.82	394.14
		BGAA	3	11.25	10.05	13.07	1.60	10.62	3.02
		BGAE	46	190.56	0.57	332.99	105.48	232.35	332.42
		BGAJ	113	145.41	0.23	427.85	126.69	134.47	427.62
		BGAN	19	83.98	3.60	250.51	79.84	60.55	246.91
		BGAV	228	175.89	0.44	365.56	86.00	192.34	365.12
		Total	539	179.53	0.00	427.85	107.75	208.66	427.85
	BMM	BGAA	4	10.08	0.46	37.87	18.53	1.00	37.41
		BGAJ	89	59.72	0.23	263.67	63.79	40.31	263.44
		BGAN	232	82.26	0.00	267.62	60.37	73.68	267.62
		BGAV	30	98.12	1.15	266.38	66.29	87.42	265.23
		Total	355	77.14	0.00	267.62	62.72	62.20	267.62
	Total	BDAJ	32	256.29	0.00	399.07	101.09	272.93	399.07
		BDAT	20	119.19	0.67	266.14	101.53	130.82	265.47
		BDAV	83	232.10	0.00	394.14	105.30	260.63	394.14
		BGAA	118	66.21	0.22	218.06	53.97	63.71	217.84
		BGAE	61	192.84	0.57	332.99	104.40	234.12	332.42
		BGAJ	282	101.00	0.17	427.85	105.51	58.29	427.68
		BGAN	312	76.42	0.00	267.62	62.38	60.51	267.62
		BGAV	344	154.43	0.44	365.56	88.54	161.99	365.12
		Total	1252	123.70	0.00	427.85	101.28	99.38	427.85

Appendix D Definition of Terms

Term	Definition
ADM	Ambulatory Data Module interfaces with CHCS to download upcoming patient appointments and later, to update them. Information collected by ADM is used by military treatment facility (MTF) commanders and other decision-makers to evaluate the cost-effectiveness of care provided; AHLTA has replaced ADM in many locations
AHC	After Hours Clinic is staffed on a rotational basis by DFCM core assets; 1700-2100 weekdays, by appointment
AHLTA	Armed Forces Health Longitudinal Technology Application, the Defense Department's electronic medical record-keeping system.
BHC	Bennett Health Clinic supports 4ID Soldiers and their family members
BMM	Borrowed Military Manpower the use of Soldiers borrowed from either a modification table of organization and equipment (MTOE) or TDA organization to perform duties within a TDA activity where a major command-approved manpower requirement exists but for which no manpower space has been authorized or where the manpower space has been authorized but the position is unfilled.
CFCC	Cove Family Care Clinic in Copperas Cove that provides care for family members
CHCS	Composite Health Care System is a Virtual Memory System (VMS) based relational database designed by Science Applications International Corporation and used by all United States and OCONUS military health care centers.
CMS	Centers of Medicare and Medicaid Services is a federal agency within the United States Department of Health and Human Services (DHHS) that administers the Medicare program and works in partnership with State governments to administer Medicaid, the State Children's Health Insurance Program (SCHIP), and health insurance portability standards.
CPT	Current Procedural Terminology is the list maintained by the American Medical Association to provide unique billing codes for health services rendered.
CRDAMC	Carl R. Darnall Army Medical Center opened in 1965 and is located on Ft Hood in central Texas.
DFCM	Department of Family and Community Medicine performs 90% of the primary care services on Ft Hood and is the largest department in CRDAMC with eight clinics and three troop medical centers.
E&M	Evaluation and Management services are those services provided by physicians and non-physician practitioners to evaluate patients and manage their care. The code is chosen based on where the service is performed, the extent of history taken, and the extent of the examination and the level of medical decision making.
FMRC	Family Medicine Residency Center supports active duty and their family members and retiree and their family members
FNP	Family Nurse Practitioner is a registered nurse who has completed advanced education (generally a minimum of a master's degree) and training in the diagnosis and management of common medical conditions, including chronic illnesses. Nurse practitioners provide a broad range of health care services.
FP	Family Practice is a physician/medical doctor who provides primary care. A FP treats acute and chronic illnesses, provides preventive care and health education for all ages and both sexes.
FTCA	Federal Torts Claim Act is a statute enacted by the United States Congress in 1946 permitting private parties to sue the United States in a federal court for most torts committed by persons acting on behalf of the United States.
FTE	Full time equivalent is the MHS way of measuring amount a health care provider spends with patients. An FTE of 1.0 means that the provider spent 8 hours seeing patients on that particular day. An FTE of 0.5 may signal that the provider is only spending half their time with patients.
FY06	Fiscal Year 2006 includes the months of October 2006 thru September 2006
GMP	Graduate Management Project – an approved one is required by Army-Baylor residents to successful completion of the residency phase.

GWOT	Global War on Terror is the military campaign being conducted around the world to defeat terrorism.
MEDCOM	Medical Command is a major command of the U.S. Army that provides command and control of the Army's fixed-facility medical, dental, and veterinary treatment facilities, providing preventive care, medical research, development and training.
MEPRS	Military Expense and Performance Reporting System is a cost management system that accumulates and reports expenses, manpower, and workload performed by the Department of Defense (DoD) fixed military medical and dental treatment facilities.
MHC	Monroe Health Clinic supports 1CD Soldiers
MTF	Medical Treatment Facility is a facility that was established for the purpose of furnishing medical and/or dental care to eligible individuals.
MHS	Military Health System health support for the full range of military operations and sustaining the health of all those entrusted to our care.
M2	MHS Management Analysis and Reporting Tool is a powerful ad hoc query tool for detailed trend analysis such as patient and provider profiling. M2 provides summary and detailed views of population, clinical, and financial data from all Military Health System regions worldwide and includes direct and purchased care data.
ODP	Officer Distribution Plan is the AMEDD's methodology to identify projected personnel inventory by Area of Concentration (AOC), identify authorized positions by their priority of fill, and distribute personnel to those positions in accordance with Department of the Army (DA) and AMEDD policy.
OIF	Operation Iraqi Freedom the 2003 invasion of Iraq which began on March 20
OTSG	Office of the Surgeon General is responsible for ensuring there is consistent quality health services on the battlefield and at home for our Soldiers and our military family.
Primary Care Provider	Department of Family and Community Medicine primary care providers that are in the analysis are Family Practice (FP), Physician Assistant (PA) Family Nurse Practitioner (FNP), Pediatrics Nurse Practitioner (PNP), Pediatrics (PEDS), and Other.
PA	Physician Assistant are non-physician clinicians licensed to practice medicine with a physician's supervision. Generally have a master's degree in medicine from an accredited university.
PEDS	Pediatrics is the branch of medicine that deals with the medical care of infants, children, and adolescents (from newborn to age 16-21, depending on the country).
PI	Process Improvement is a series of actions taken to identify, analyze and improve existing processes within an organization to meet new goals and objectives. These actions often follow a specific methodology or strategy to create successful results.
PNP	Pediatrics Nurse Practitioner Nurse practitioners provide much of the same care provided by pediatric physicians and usually maintain close working relationships with these physicians. PNP can prescribe medications and have a DEA registration number in most states. An NP can serve as a patient's regular health care provider and see patients of all ages.
Productivity	is measured as the number of RVUs, per provider, per day in the MHS
RBRVS	In 1992, Medicare implemented a payment schedule based on a resource-based relative value scale so as to put controls on health care costs.
RVU	Relative Value Unit is the weighted measure of effort/complexity involved in a given patient visit.
RVU/PP/PD	Relative Value Units, per provider, per day are the number one metric used by OTSG and MEDCOM for decisions concerning MTF resourcing ($) and assignment of military staff (ODP).
RVUpe	Practice expense component of a relative value unit.
RVUm	Malpractice expense component of a relative value unit
RVUw	Physician work expense component of a relative value unit. The military health system (MHS) uses the RVUw to measure provider productivity. RVUw is comprised of the time it takes to perform the service; the technical skill and physical effort; the required mental effort and judgment; and stress due to potential risk to the patient.

SPSS	Statistical Package for the Social Sciences 12.0.2 is a data management and analysis software that allows users to generate solid, decision-making results by performing statistical analysis
TDA	Table of Distribution and Allowances are generally non-combat, non-deployable workload based units; personnel of a TDA organization can be military, civilian, or a combination of both.
TMHC	Thomas Moore Health Clinic supports 13th COSCOM Soldiers, active duty family members, and retirees/retiree family members
TMC 10	Troop Medical Center 10 supports 1CD Aviation Brigade
TMC 12	Troop Medical Center 12 supports 4ID Aviation Brigade
TMC 14	Troop Medical Center 14 provides healthcare for activated reservists during train-up
UCAPERS	Uniformed Chart of Accounts Personnel Utilization System purpose it to meet DoD MEPRS reporting requirements by providing man hours, full-time equivalent, and expense data.
WACC	Weekend Acute Care Clinic is staffed on a rotational basis by DFCM core assets; 0800-1700 on Saturdays & Sundays, by walk-in and appointments
VA	Veteran Affairs is a government run single-payer health care system with Cabinet level status. It is responsible for administering programs of veterans benefits for veterans, their families, and survivors.