Running head: PROVIDER TYPE AND PATIENT SATISFACTION

Graduate Management Project

Affects of Provider Type on Patient Satisfaction, Productivity and Cost Efficiency

Presented To

CDR Chris Garcia, Ph.D., M.B.A.

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Healthcare Administration

By

LCDR Timothy Foster, NC, USN

25 APR 2006

Title Page

Disclaimer

The views expressed in this paper are those of the author and do not reflect the official policy or position of Baylor University, the Department of the Navy, the Department of the Army, the Department of Defense, nor the United States Government.

Statement of Ethical Conduct in Research

The data used in this study were obtained from automated government databases. No personal identifiers were used. The author declares no conflict of interest or financial interest in any of the facilities included in this study.

Acknowledgements

My wife, Patricia, provided unwavering support and made the successful completion of this project possible. My preceptor, COL Lupo, provided mentoring and ensured that I had the research time necessary to complete the degree requirements.

Abstract

The purpose of this one year retrospective quantitative study is to determine if the type of provider (physician, nurse practitioner, and physician assistant) influences patient satisfaction and productivity. As the prospective payment system becomes more widely used in the military healthcare system, patient satisfaction and provider productivity will become more important for financial reimbursement. This study is useful to determine the provider types most desired and accepted by military patients, in addition to yielding a satisfactory workload output. Many studies have been conducted in the civilian community; however, few studies address these issues within the military system. 104,013 Army beneficiaries who visited their Primary Care Managers (PCM) from January 2004 to December 2004, were surveyed and their results were used as the sample for this study. Provider efficiency within CONUS Military Treatment Facilities (MTFs) was evaluated using the period of January 2004 to December 2004, with a sample size of 20,421. The alpha level was set at .05 and multiple linear regression and analysis of variance were used to determine the predictive value of the model. The results show that there is a statistically significant positive relationship between nurse practitioners and patient satisfaction. The analysis of variance showed that physician assistants have a lower cost per visit ratio, and there is no difference between provider types and relative value units.

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Introduction

The purpose of this one year retrospective quantitative study is to determine if the type of provider, defined as a physician, a nurse practitioner, or a physician assistant, influences patient satisfaction and if there is a difference in their productivity and cost efficiency. For the purpose of this study productivity is operationally defined as encounters per month, relative value units per month and cost efficiency as cost per visit ratio. In the next four years, prospective payment will be phased-in. The prospective payment system allocates money to the Military Treat Facilities (MTFs) based on business goals and productivity (Winkenwerder, 2004). As the prospective payment system becomes more widely used in the military, patient satisfaction, provider productivity, and cost efficiency will become more important for financial reimbursement.

Problem Statement

The budget for military treatment facilities (MTFs) has been historically based on the previous year's budget, plus inflation. With the implementation of the prospective payment system, the MTF Commanders will need to examine ways to demonstrate effectiveness of care and cost efficiency to compete with purchased care alternatives. Many studies have been published comparing physicians and nurse practitioners; however, few studies have addressed the military health care system. Operational commitments and practice patterns make the military health care system unique; thus, it is difficult to generalize the results from studies conducted at civilian sites to military treatment facilities. The conditions that prompted this study are changes in the MTF reimbursement

system, rising costs of health care, and the limited studies that are generalizable to military healthcare. The results of this study will assist decision makers in identifying human resources that increase productivity and patient satisfaction.

Research Question

Is there a relationship between provider type and patient satisfaction? Is the there a difference between provider type and productivity and cost efficiency.

Review of the Literature

The literature review will be divided into four sections. Section I provides the theoretical background. Section II discusses the financial impact and factors influencing the cost of healthcare. Section III discusses the different types of primary care providers and their unique educational preparation which may contribute to differences in practice patterns and patient satisfaction outcomes. Section IV deals with patient satisfaction.

Section I Theorectical Background

Donabedian (1966) described quality health care with the following constructs: structures, processes, and outcomes. These constructs can be further defined with variables that can be objectively measured. Structures refer to the relatively fixed characteristics of health care organization and those who staff it. Structures can include educational training and certification of those who provide care. Staffing levels, building organization, and equipment are considered fixed structures that may be changed, but not rapidly. Having adequate structures in place contributes to quality; however, it does not guarantee quality (Donabedian, 1993).

Ransom, Maulik and Nash (2005) describe processes as what takes place during the delivery of care. This includes appropriateness of actions and skill. Excellent processes do not guarantee good outcomes and good outcomes do not indicate good processes. Some patients get well or recover despite inappropriate processes and other patients may have poor outcomes after receiving the best care. Even with this apparent contradiction, good processes most often result in good outcomes (Ranson et al, 2005). According to Perrin (2002), understanding how processes and structures relate to an outcome is valuable because processes and structures can be manipulated and controlled. Therefore, by carefully studying patient satisfaction and productivity, potential improvements in key processes and structures may be achieved. In order for a public health system to achieve its mission, appropriate structures and processes must be in place (Handler, Issel & Turnock, 2001)

Section II Financial Concepts

Provider productivity and costs have been addressed by civilian managed care organizations (MCOs) from both supply and demand side economics (Kongstvedt, 2002). The civilian healthcare system has many differences from the military system in terms of economics and cost control. In the civilian sector, prospective payment systems pass a certain amount of financial risk to providers and gives financial incentives to providers who are cost efficient. The military healthcare system has no way to pass risk directly to providers or give equivalent productivity incentives to providers. The prospective payment system that is being implemented in the military health system partially addresses this by giving

the MTF more funding for higher productivity. These funds may help the organization; however, they do not give the providers direct financial incentives to work longer and take on more patients like the civilian model allows. In order to curb demand for healthcare, civilian MCOs can decrease benefits, increase co-pays, and increase deductibles. Military healthcare benefits, copays, and deductibles are controlled by congressional legislation; therefore, MTF commanders have few demand-side options to curb utilization (Code of Federal Regulations, Title 32, Part 199). In 2002, Congress enacted a law in the military healthcare system that enabled women to choose civilian maternity care providers without a non-availability statement or prior approval from an MTF. This provided more choice for the maternity patient and put the MTF in competition with the civilian healthcare system for obstetric services (National Defense Authorization Act for Fiscal Year 2002). In the civilian sector, human resources can be optimized for provider productivity and cost efficiency. In the military healthcare system, human resources are often determined by operational commitments and not provider productivity. With the limitations on supply-side cost controls, demand-side utilization management, and human resources, MTF Commanders will need to optimize available resources and develop innovative strategies to maintain funding in a prospective payment environment.

Provider productivity and cost efficiency can be measured in multiple ways which include: simple patient visit counts, Relative Value Units (RVUs), and resource utilization. Simple visit counts entail counting the number of patient encounters a provider sees in a day. It is a very easy method of workload

measurement, but it does not account for differing levels of illness and complications that a patient presents with. RVUs are standardized clinical workload values based on Current Procedural Terminology (CPT) codes (Glass & Anderson, 2002). More intensive services receive a higher value than low intensity services. This model is more accurate at measuring workload than counting the number of patient encounters, but it has some limitations. Coleman, Moran, Serfilippi, Mulinski, Rosenthal, Gordon, and Mogielnicki (2003) noted that RVUs are higher for procedures than for cognitive and decision making skills, which makes procedure-oriented providers seem more productive than providers who manage complex patients. Another significant weakness to RVUs is coding compliance. If visits are not coded accurately, the workload will be artificially inflated or deflated. Glass and Anderson (2002) recommend using more than one measurement of provider workload.

Resource utilization is another method of measuring workload in terms of costs. One way to define the cost to the MTF of providing healthcare is according to fixed and variable costs. Fixed costs include building maintenance, utilities, telephone, durable medical equipment, and custodial costs. Fixed costs remain even if no patients are seen. Variable costs are costs that change according to the volume of patients seen and the resources consumed. Resources include such things as prescriptions, lab tests, radiological studies, and consumable supplies. Variable costs increase as the volume of patients increases (Zellman, 2004). Providers can control the variable cost of healthcare

by ordering tests, making referrals, prescribing medications and hospitalizing patients.

The cost of health care is driven partially by the practice patterns of providers. This variation in practice may be related to where the provider was trained, patient expectations, and practice style. In an article by Nagurney, Braham, and Reader (1979), clinical decisions by providers accounted for 55% of total health care costs. Providers, who order more tests and prescribe more medications than their peers, utilize more resources per patient. A high resource utilization rate leads to a higher cost for the system. Cost per visit ratio is a useful measure of resource utilization. It is calculated by dividing the total variable cost for period of time by the total patient encounters during that same period. This ratio show how efficient the providers are at utilizing resources and may be affected by how a provider was trained.

Section III Provider Differences

Physicians, physician assistants, and nurse practitioners are trained differently and have a different focus on patient care. Physicians focus primarily on curative medicine (Alpert, Fjone & Condela, 2002). Nurse practitioners emphasize patient education, disease prevention, and health promotion (Sherwood, Brown & Fay & Wardell, 2002). Nurse practitioners in primary care go beyond medical care to include roles as a patient educator, motivator, administrator, and advocate (Alpert, Fjone & Condela, 2002). Physician assistants are trained in the medical model similar to physician but with shorter duration and limited scope (American Academy of Physician Assistants, 2006).

The training of nurse practitioners varies and there are currently three paths to becoming a nurse practitioner. The first path is through a master's degree in nursing in the clinical area of emphasis such as family practice. The candidate must first possess a bachelor's degree in nursing and at least one year of nursing experience prior to applying for nurse practitioner training with total training time of seven to eight years. The second path is to skip over the master's degree and obtain a clinical doctorate in nursing with a total training time of eight to nine years. The nursing doctorate provides additional training in research and teaching methods. The third path is to obtain a post-master's certification. This path is used when nurse already possesses a master's in another nursing specialty and wants to broaden skills and abilities. Nurse practitioner's have an independent license and in most states can prescribe medications according with the nurse practice acts of each state (Apert et al. 2002).

The training of a physician differs from a nurse practitioner. In order to apply to medical school, medical students first must obtain a bachelor's degree with a significant emphasis in science. Students may then choose between two types of medical schools: allopathic or osteopathic. The allopathic medical school emphasizes curative medicine and surgery. The osteopathic medical schools focus on primary care and holistic measures including spinal manipulation treatments. Upon completion of their chosen path both allopathic and osteopathic physicians are licensed by their state and may become board certified in any medical specialty (Princeton Review, 2006). Medical school is

four years in length followed by a one year internship and two to five year residency with a total training time of 11-15 years depending upon specialty (American Medical Association, 2005).

Physician assistants follow a very similar curriculum as physicians, but the training time is much shorter. Physician Assistants are trained along with medical students at medical schools and may even take some of the same courses as the medical students. Physician assistants graduate with a bachelor's degree and may apply for certification with a training time of four years. Physician assistants work under a supervising physician's license and often follow the practice pattern of his or her supervisor (American Academy of Physician Assistants, 2006).

Section IV Patient Satisfaction

Patient satisfaction is a psychological outcome that is frequently measured because of its significance to organizations. Patient satisfaction is important because dissatisfied customers may leave the military primary care system in favor of the more expensive purchased care system. In addition, dissatisfied customers may tell friends and family of their dissatisfaction and give a negative perception of an organization. In a study by Horrocks, Anderson, and Salisbury (2002), a meta-analysis of 34 studies found that patients were more satisfied with nurse practitioners than physicians. The higher satisfaction rate may be due to differences in training and more time spent with patients (Horrocks et al., 2002). In a study by Kinnersley, Parry, Clement, Archard, Turton, Stainthorpe, Fraser, Butler, and Rogers (2000), nurse practitioners had higher satisfaction scores,

equivalent patient health outcomes, and spent more time with patients than physicians. Although nurse practitioner's performed well when compared to physicians, the longer time spent with patients can reduce productivity and thereby reduce cost effectiveness (Venning, Durie, Roland, Roberts, & Leese, 2000). A large meta-analysis study by Laurant, Hermans, Braspenning, Grol, and Sibbald (2005), in which nurse practitioners were compared with physicians in primary care setting, found no significant differences in patient outcomes but a higher patient satisfaction with nurse practitioners.

Purpose

The purpose of this one year retrospective quantitative study is to determine if the type of provider influences patient satisfaction and if there are differences in provider productivity and cost efficiency. Patient satisfaction with the provider is operationally defined as the overall satisfaction score on a 5-point scale with one being completely disagree and five being completely agree. Productivity is operationally defined as the number of patients seen per month, relative value units of patients seen, and cost efficiency is operationally defined as cost per visit ratio.

Hypotheses

Model 1 Patient Satisfaction

H0—There is no relationship between provider type and patient satisfaction levels

Ha – Patient satisfaction is related to provider type

Model 2 Provider Productivity by RVUs

H0 – There is no difference between provider type and RVU productivity

Ha – There is a difference in provider type and RVU productivity

Model 3 Provider Productivity by Encounters

H0 – There is no difference between provider type and number of encounters

Ha – There is a difference between provider type and number of encounters

Model 4 Provider Cost Efficiency

H0 – There is no difference between provider type and cost per visit ratio

Ha—There is a difference between provider type and cost per visit ratio

Equations

Model 1 Patient Satisfaction

Overall patient satisfaction = provider type + facility type + seen by PCM + patient age group + gender + provider rank + month + civilian provider + patient category

Model 2 Productivity by RVUs

RVUs = provider type + calendar month

Model 3 Productivity by number of encounters

Encounters = provider type + calendar month

Model 4 Productivity by cost per visit ratio

Cost/Visit ratio= provider type + calendar month

Data Sources

Cases were taken from the M2 datamart for productivity measures for primary care providers for calendar year 2004. The cases for patient satisfaction were taken from the Provider Level Patient Satisfaction Survey (PLPSS) maintained in a database at Army Medical Department (AMEDD) from January 2004 to December 2004. The PLPSS is used by the military to assess beneficiary satisfaction with a provider, see Appendix A. For the purpose of this study only first eight questions, page 1 of PLPSS, were used. The PLPSS was initiated by the AMEDD leadership in 2002 to give providers and MTF leadership timely feedback from patients. Physicians, nurse practitioners and physician assistants who have at least 1000 outpatient encounters per year are provided with patient satisfaction feedback. Patients are surveyed within 48 hours of a visit using a 20 question form. A five point scale was used for questions 1 through 7 was 1 equals completely disagree and 5 equals completely agree. Question number 8 was yes/no. Not all patients filled out questions 9 through 20; therefore, only data from the first eight questions were used. Patients are chosen so that a target of 200 surveys is completed annually per provider (PLPSS, 2006).

The M2 datamart collects data from data repositories throughout the Department of Defense (DoD) and includes purchased care and direct care. The data from the M2 datamart are derived from multiple redundant data sources and are prescreened by the database administrators. Inconsistent or extraordinary numbers are questioned and corrected ensuring reliability of the data.

Ethical Considerations

The data was extracted from existing government data sources and no personal identifiers were used in this study.

Research Methods and Procedures

The methods and procedures for the patient satisfaction component of this study were replicated from a previous study by Mangelsdorff and Finstuen (2005), with some refinements. The variables fall into three categories: individual patient variables (age group, status, and gender), situational variables (MTF size, and provider rank, month) and beliefs about care (time spent, listened, understood, courtesy, explained, helped with problem) as described by Mangelsdorff and Finstuen (2005). The refinements included the addition of provider type and provider rank and exclusion of beliefs about care variables. The TRICARE enrollment status and region where the patient was enrolled were not used because these variables were not captured by the database. Only Army beneficiaries were included in the survey from January 2004 to December 2005.

The unit of analysis is provider type: physician, nurse practitioner, and physician assistant. The patient satisfaction survey results originally contained 319,872 cases; however, the survey did not distinguish between primary care providers and specialists. First, the cases were filtered by appointment type and all emergency room appointments were eliminated. Although nurse practitioners and physician assistants work in emergency rooms, the focus of this study was on primary care rendered in the outpatient clinic. Second, the cases were filtered

by the provider specialty and provider class variables; see Appendix B and Appendix C for description of these variables. In cases where the provider was a specialist, the case was filtered out. In some of the cases, the provider class variable had the value of "Provider," which could have referred to all types of providers. When this occurred, the provider specialty variable was used to determine the provider type. After eliminating all specialty providers, the remaining cases were 105,211. Of those cases, 304 were removed due to vague or incomplete provider specialty description and 894 cases were removed due to missing data bringing the final case count to 104,013. The provider class and provider specialty variables were recoded to three mutually exclusive binary variables of 1 for present and 0 for absent, see Appendix D for Statistical Program for Social Sciences (SPSS) syntax used to filter provider type variables. Patient category was defined as active duty, active duty family members, retirees, and other. The raw data contained 225 different patient categories, see Appendix E. These were re-coded into one of four patient categories for analysis.

The unit of analysis for provider productivity measures and cost efficiency is provider type. The following variables from M2 were used: fiscal year 2004, provider type (Limited to Family Practice physicians, Family Nurse Practitioners, and Physician Assistants), calendar month, Simple RVUs, Total Encounters, and cost per visit ratio, which is variable cost divided by total encounters. Business Objects was used to extract 34,335 cases from M2 in the direct care (i.e., MTF) professional encounters table. The treatment facilities were limited to those in

the continental United States. Only countable visits for primary care clinics with MERPS code BGA and BHA were included. Inpatient visits were excluded. The providers were limited to family practice physicians (coded 001), physician assistants (coded 901), and family nurse practitioners (coded 604), see Appendix F for query visual. In order to prevent the averages from being skewed by part-time providers, cases were limited to full-time providers. Full-time was operationally defined as greater than 100 encounters per month. The assumption being that a full-time provider will average five or more encounters per day. After filtering out the cases with less than 100 encounters per month, the final case count was 20,421.

The productivity and cost efficiency measures were divided into three models. Each model had benefits and limitations. By including more than one measure, the researcher have a more accurate description of productivity (Glass,2005). Calendar month was included to determine if there were seasonal differences. The first model used number of encounters as the dependent variable and provider type and calendar month as the independent variables. Encounters were operationally defined as face to face clinic visits with a provider that were entered into a MTF information system and coded using CPT and ICD9 codes. Telephone consults and inpatient visits were excluded. The second model used RVUs as the independent variable. The third model used cost per visit ratio. This simple ratio can be used with other measures of productivity to give an indication of which providers are most cost effective in use of resources (Vincent, 2002). Cost per visit ratio is derived by dividing the variable cost of

production by total number of patient visits (Vincent, 2002). The M2 data dictionary (M2, 2006) defines the variable cost as MTF wide average based on Ambulatory Patient Groups (APG) that includes supply and ancillary costs. This cost varies from encounter to encounter.

The analyses used for Model 1 were descriptive statistics and multiple linear regression. Multiple linear regression was chosen to determine if the independent variables were predictive of the dependent variable, overall patient satisfaction. Model 1 was subdivided by following groups: age, gender, MTF type, provider rank, provider type and a comparative analysis was done using the general linear model. The descriptive statistics for Model 2-4 are summarized in Table 2. The general linear model was used for all three of these models to find if there was a difference in provider type and the dependent variables.

Results

The findings will be presented as follows: descriptive statistics for each model, graphs to visually show each model, and then inferential statistics for each model. Table I summarizes the descriptive statistics for the patient satisfaction variables with an alpha level of .05 used for all statistical tests. The overall patient satisfaction, question number 7 on the PLSS form, average was 4.54 with a standard deviation of .986. The age group with the largest number of cases was 45-64 year of age with 27,323 cases. The scores were slightly above the overall mean for the 17 and under age group and declined to less than the over mean for age 18 thru 24. The standard deviation for this age group was greater than all other groups. From ages 45 to 64 the mean satisfaction score

was greater than the overall average. The age group of 65 or greater had the highest mean score of 4.83 and least variation with a standard deviation of .603, which indicates the over 65 patients are consistently more satisfied with the services they receive.

Table 1
Descriptive Statistics: Demographic Variables Predictive of Patient Satisfaction

			Patient Satisfaction	
Variable	No	%	Mean	S.D.
Overall Patient Satisfaction	104,013	100.00	4.54	0.986
Age Group				
0-17	16,175	15.6	4.56	0.969
18-24	13,543	13.0	4.33	1.156
25-34	17,701	17.0	4.38	1.135
35-44	19,905	19.1	4.51	0.996
45-64	27,323	26.3	4.66	0.848
>= 65	9,366	9.0	4.83	0.603
Gender				
Male	49,809	47.9	4.54	0.973
Female	54,204	52.1	4.54	0.999
MTF Type				
Medical Center	16,989	16.3	4.61	0.920
Hospital	33,706	32.4	4.57	0.959
Clinic	53,318	51.3	4.50	1.022
Rank				
Civilian	62,303	59.9	4.52	1.007
O1	1,907	1.8	4.46	1.067
O2	2,838	2.7	4.50	1.015
O3	17,521	16.8	4.55	0.987
O4	14,270	13.7	4.62	0.901
O5	3,911	3.8	4.62	0.902
O6	1,114	1.1	4.72	0.776
Unknown	149	.1	4.50	1.024
Patient Category				
Active Duty	28,904	27.8	4.40	1.096
Active Duty Family Member	33,535	32.2	4.51	1.030
Retired	13,871	13.3	4.74	0.743
Other	27,703	26.6	4.63	0.986
Provider PCM	29,721	28.6	4.65	0.872
Provider Type				
Physician	49,880	48.0	4.55	0.981
Nurse Practitioner	23,901	23.0	4.63	0.884
Physician Assistant	30,232	29.0	4.54	0.986

Beneficiary category had active duty and active duty family members with 60% of cases. Active duty had the lowest satisfaction mean at 4.40 while retirees had the highest at 4.74. Figure 4 illustrates the relationship between provider type and patient satisfaction with respect to patient category. Nurse practitioners scored higher with all four patient categories. Active duty and active duty family members had the lowest mean satisfaction score for all provider types. Retirees appeared to be the most satisfied with care. Retirees and beneficiaries in the "other" category were positively correlated with patient satisfaction.

Physicians accounted for 48% of all cases while nurse practitioners had 23% and Physician assistants had 29%. Nurse practitioners had the highest mean satisfaction score of 4.63 and the lowest standard deviation. The beliefs about the care variables were not included because of the high multiple colinearity. All beliefs about care variables had a correlation of greater than .7 with the dependent variable, overall patient satisfaction. According to Mangelsdorff (2006), multiple colinearity violates the assumption of independence of variables and artificially inflates the R-squared value (personal communication, April, 13, 2006). In order to minimize this effect, the variables pertaining to beliefs about care were excluded.

The mean scores for age group had a pattern of an inverted arc, see Figure 1. The surveys were almost equally distributed between males and females with an average satisfaction score of 4.54. There was not a statistically significant difference between genders. The MTF type showed medical centers

with a surprisingly higher level of satisfaction than hospitals and clinics as shown in Figure 2.

Figure 1

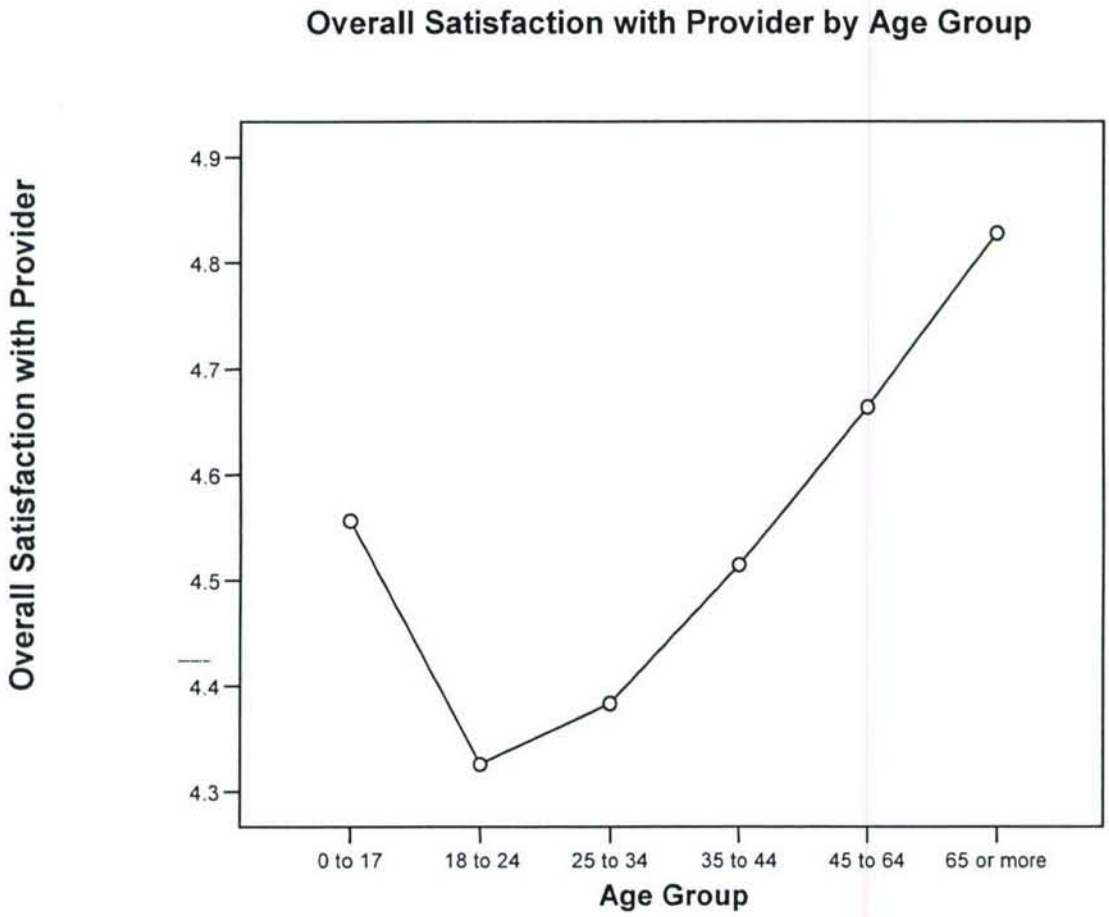
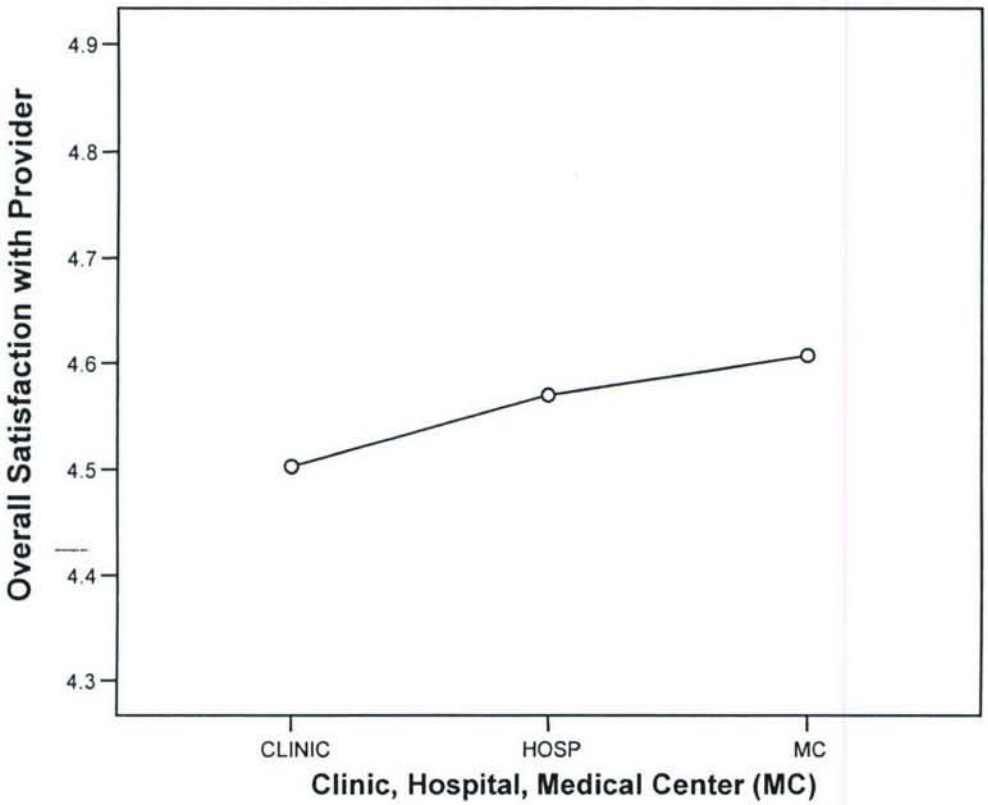


Figure 2

Overall Satisfaction with Provider by Facility Type



Rank served as a proxy for experience since most providers start as an O1 to O3. Physicians and nurses, who enter the military with significant civilian experience, may be commissioned at a higher rank than O3. In some cases, senior nurses went back to school to become nurse practitioners. Rank was predominantly civilian representing over 59% of the providers. Civilian providers had the lowest satisfaction scores while senior military providers who had higher ranks had the highest, as shown in Figure 3. Overall satisfaction with provider by month is displayed in Figure 4.

Figure 3

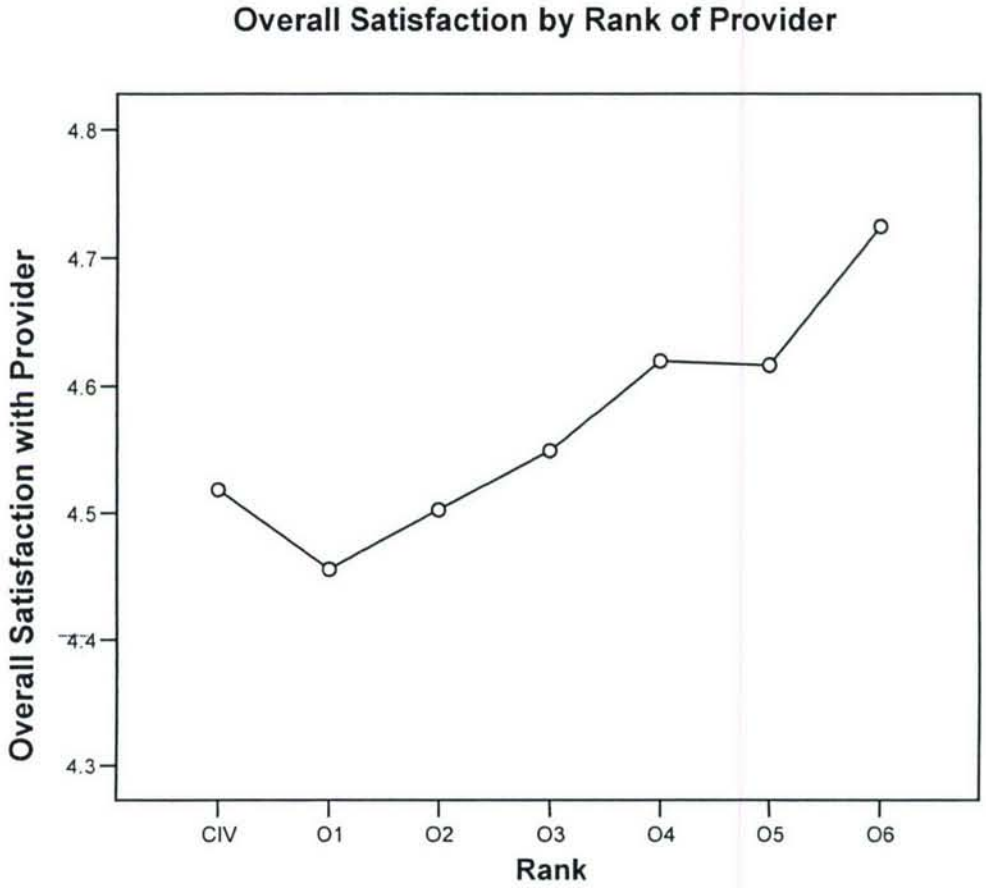
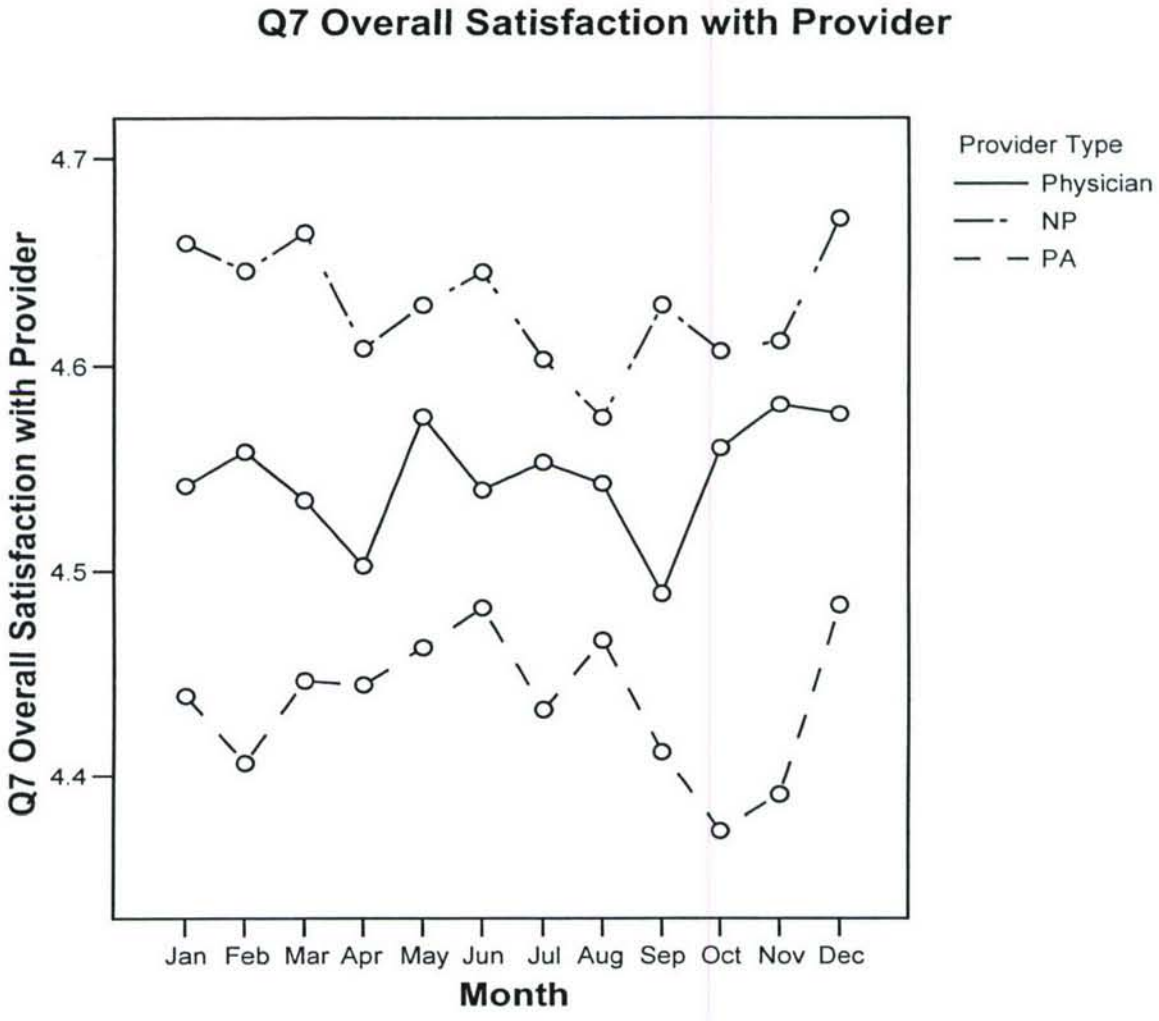

Overall Satisfaction by Rank of Provider
Overall Satisfaction with Provider
4.8
4.7
4.6
4.5
4.4
4.3
CIV
O1
O2
O3
O4
O5
O6
Rank

Figure 4



Model 1 inferential statistics are displayed in Table 2. The summary shows the R = .171 with adjusted R-square of .029. The F score of 149.814 indicates statistical significance for predicting patient satisfaction at the .0001 level. Even with this high level of significance the low R square value means that a large part of the shared variance is not accounted for by this model.

Table 2
Inferential Statistics: Model 1 Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.171(a)	.029	.029	.972	.029	149.814	21	103991	.000

a Predictors: (Constant), Rnk_UKN, Age_35to44, Rnk_O6, Rnk_O5, Cat_FM, Qust_MPCM, MedCen, Rnk_O4, Rnk_O1, Rnk_O2, Age_18to24, NP, Rnk_O3, Hosp, Age_65orMore, Patient_Gender, Age_25to34, PA, Cat_RET, Age_17andBelow, Cat_OTH
b Please see Appendix G SPSS printout for full regression output.

Provider productivity and cost efficiency was analyzed using analysis of variance. In Model 2, productivity was analyzed by the number of encounters per month. In Model 3, productivity was analyzed by RVUs per month. The fourth model used the cost per visit ratio by month. The descriptive statistics for Models 2-4 are shown in Table 3. Physicians had the largest number of providers at 47.5% followed by physician assistants at 38.9% and then nurse practitioners at 13.6% of total cases. Physicians had the lowest mean for encounters per month at 243.98 and physician assistants had the highest at 270.42.

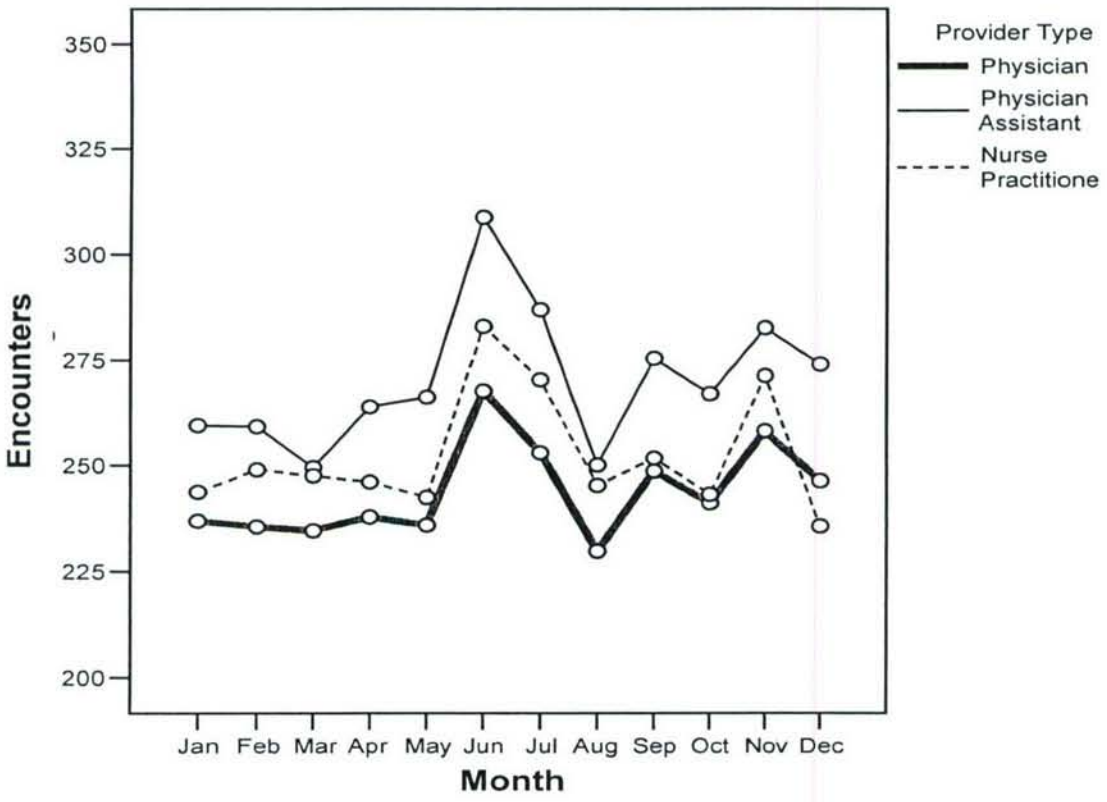
Table 3
Summary Statistics: Encounters, RVUs, and Cost/Visit Ratio by Provider Type

Variable	No. of cases	%	Mean	S.D.
Physicians				
Encounters	9,694	47.5	243.98	100.39
RVUs	9,694	47.5	196.83	45.64
Cost/Visit ratio	9,694	47.5	188.53	81.25
Nurse Practitioners				
Encounters	2784	13.6	252.51	163.44
RVUs	2784	13.6	201.89	114.21
Cost/Visit ratio	2784	13.6	169.45	46.22
Physician Assistants				
Encounters	7943	38.9	270.42	156.24
RVUs	7943	38.9	198.28	113.52
Cost/Visit ratio	7943	38.9	160.64	47.38

Figure 5 shows the mean encounters with respect to the calendar month. The seasonal effects are clearly visible. The summer months of May through August 2004 have a spike in number of encounters for all provider types. November and December have a spike in encounters but not as pronounced as during the summer months. Physicians and nurse practitioners were slightly below the overall mean for encounters during this period.

Figure 5

Model 2: Encounters by Month



Analysis of Variance: Encounters

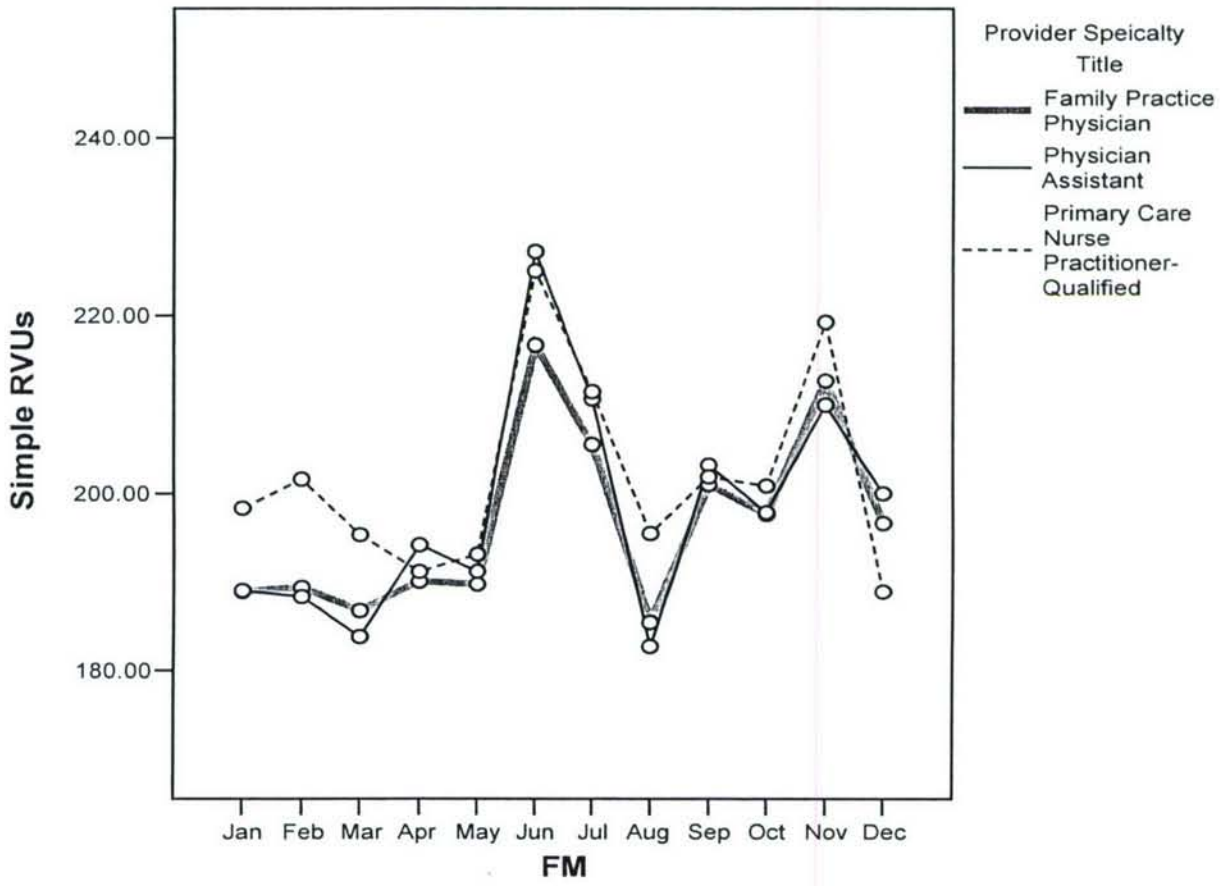
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Model 2	Encounters	3079066.459(a)	2	1539533.230	85.901	.000

a R Squared = .008 (Adjusted R Squared = .008)

In the second model, the mean RVUs were highest with the nurse practitioners at 202.89 with a large standard deviation. Physician assistants were next at 198.28 with a similar standard deviation to the nurse practitioners. The mean for the physicians was slightly lower at 196.83; however, the standard deviation was less than half the nurse practitioner and physician assistant. This may be due to physicians having seen more complicated patients; thus, keeping their average high with minimal variation. The larger standard deviation for the nurse practitioner and physician assistant may mean they saw a wide variety of patients from uncomplicated to complex. The mean RVUs with respect to calendar month are shown in Figure 6. All provider types were closely fit together with the lines overlapping in some places.

Figure 6

Model 3: Simple RVUs by Month



Analysis of Variance: Relative Value Units

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Model 3	Simple_RVU Simple RVU	55881.505(a)	2	27940.752	2.815	.060

a. R Squared = .000 (Adjusted R Squared = .000)

In Model 4, the cost per visit ratio was lowest for physician assistants at $160.64 and highest for physicians at $188.53. The standard deviation for the physician was almost double the standard deviation of nurse practitioners and physician assistants. The higher average cost and higher standard deviation

may be explained by the physicians seeing more complicated patients that required more tests and medicines.

Analysis of Variance: Cost per Visit Ratio

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Model 4	Cost per Visit ratio	3499720.301(a)	2	1749860.150	812.582	.000

a R Squared = .074 (Adjusted R Squared = .074)

The analysis of variance shows that Model 2 had an F of 85.901 with a statistical significance of .001 and R square of .008. While statistically significant, the model does not have enough shared variance to be a reliable predictor of encounters. Model 3 did not meet the alpha level of .05 for statistical significance. Model 4 had an F of 812.582 with a statistical significance of less than .001 and R square of .074.

Limitations

The satisfaction survey addresses a recent visit, but did not address the acuity level of the visit. Acuity of the visit was reflected in the RVU score; however, it could not be matched to the same encounter that the satisfaction survey was completed on. The PLPSS was limited to Army facilities which limit the generalizability of the results of the satisfaction component to the other branches of service. In a study by Mangelsdorff and Finstuen (2005), patient satisfaction was found to be homogenous across all branches of service which appears to mitigate this limitation. All branches of service were included in Models 2-4. The shared variance as indicated by R squared value was low for both productivity and patient satisfaction.

Discussion

The purpose of this one year retrospective quantitative study was to determine if the type of provider influences patient satisfaction and if there are differences productivity measures and cost efficiency. The results of this study indicated that there was a statistically significant difference in provider types. Nurse practitioners scored higher on patient satisfaction scores than physicians or physician assistants. This is consistent with other studies in the literature Laurant Et al., (2005). Physician assistants had the highest encounter and RVU levels and the physicians had the lowest. This may be due to inpatient duties that physicians have that nurse practitioners and physician assistants do not have. The provider rank scores indicated that patients were more satisfied with the more experienced providers. This may be the because of a Halo effect with senior providers. The lower satisfaction scores for the civilian providers may be because of the lack of rank devices to distinguish the civilian providers from technicians leading the patient to perceive the provider as a technician. Results from the age group and patient category variables indicated that retired and older patients were more satisfied with the MTF providers than the younger active duty beneficiaries. This is consistent with a previous study by Mangelsdorff and Finstuen (2005).

The new prospective payment system for the military health system provides strong incentives for MTFs to contain cost, increase efficiency and maintain quality health care. Quality healthcare has been previously theorized to include structures, processes and outcomes by Donabedian (1966). Structures

such as provider mix can be manipulated by management decisions to affect outcomes. Important healthcare outcomes that are frequently measured are patient satisfaction and productivity. The findings of this study show that nurse practitioners consistently have higher patient satisfaction scores than physicians or physician assistants. The productivity results show that there is no difference in RVUs among physicians, physician assistants, and nurse practitioners and is consistent with prior studies. In a comparison study by Sulivan-Marx and Maislin (2000), RVUs of nurse practitioners were compared with Physician RVUs and concluded that there were no significant differences in the two provider types. Physician assistants had the highest average number of encounters and the lowest cost per visit ratio. The lower number of encounters seen by nurse practitioners may be explained by increased time spent with the patient. The cost per visit ratio was the best model, based on higher R-squared values and greater significance level, which showed statistically significant differences in the provider types and cost per visit. Difference in training may account for a small amount of the differences in patient satisfaction and productivity.

Conclusions

For Model 1, reject null hypothesis and accept the alternate hypothesis that there is a relationship between provider type and patient satisfaction. Nurse practitioners consistently achieved higher levels of patient satisfaction and this is consistent with other studies. More experienced providers as indicated by rank have higher satisfaction scores. Model 2 had statistical significance but the R-squared was very low at .008. For Model 3, accept the null hypothesis that there

is no difference in provider type and RVUs produced. For Model 4, reject the null hypothesis and accept the alternate hypothesis that there is a difference in provider type and cost per visit. Physician assistants maintain equal levels of RVUs and encounters at a lower cost per visit.

Recommendations

Further studies are needed to include acuity of the patient at the time of the visit and provider experience in years. This study may be useful to the hospital administrator who wishes to increase patient satisfaction, productivity, and cost efficiency by changing the provider type mix; however, these results should applied with caution due to low R-squared value. This study supports retaining experienced clinical staff, nurse practitioners, and physician assistants to achieve high levels of productivity and patient satisfaction.

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Appendix A

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DEPARTMENT OF THE ARMY
OFFICE OF THE SURGEON GENERAL
SURVEY PROGRAM OFFICE (SUITE 669)
5109 LEESBURG PIKE
FALLS CHURCH, VA 22041-3258

Please use pen or dark pencil to mark an "X" in the answer box.

EXAMPLES: Correct ☒ Incorrect ☑ ☒ ■

Please return your completed questionnaire in the enclosed envelope to, P.O. Box 5033, Chicago, IL 60680.

Army Patient Satisfaction Survey

We need your help. We are trying to improve the quality of care we give our Soldiers and their families.

According to our records you recently had a healthcare visit with Barbara A Yarber on 05/13/2005 at the Wm Beaumont Army Medical Center. Is this correct?

Yes ..... ☐ → Please continue with the survey.
No, saw someone else... ☐ → Please continue with Q9.
No, didn't have visit ..... ☐ → Please stop and return your survey now.

Thinking specifically about your visit with Barbara A Yarber on 05/13/2005 at the Wm Beaumont Army Medical Center, please rate how much you disagree or agree with each of the following. Please mark an "X" in the box for the answer that is closest to your opinion.

	Completely Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Completely Agree
1. This provider, Barbara A Yarber, spent the time with you that your medical problem required	☐	☐	☐	☐	☐
2. This provider listened to you carefully about your concerns and questions	☐	☐	☐	☐	☐
3. This provider understood your problem or condition	☐	☐	☐	☐	☐
4. This provider treated you with courtesy and respect	☐	☐	☐	☐	☐
5. This provider explained what was being done and why	☐	☐	☐	☐	☐
6. This provider helped you with your problem	☐	☐	☐	☐	☐

	Completely Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Completely Satisfied
7. Overall, how satisfied do you feel about your visit with Barbara A Yarber?	☐	☐	☐	☐	☐

8. Which of the following best describes your familiarity with Barbara A Yarber?

This provider is my Primary Care Manager (PCM) whom I see for most of my routine care ☐
This provider is not my PCM, but I had met or heard of him/her before this visit ☐
This provider is not my PCM, I had a referral to see this provider ☐
This provider is not my PCM, and I had never met or heard of him/her before this visit ☐

Please turn over and continue on the back page.

Appendix B

Provider Specialties

ADOLESCENT MEDICINE	2	ADOLESCENT MEDICINE
ADOLESCENT MEDICINE PHYSICIAN	3	ADOLESCENT MEDICINE
PHYSICIAN		
AEROSPACE MED FLIGHT	4	AEROSPACE MED FLIGHT
SURGEON/FAMILY PRACTICE	4	SURGEON/FAMILY PRACTICE
PHYSICIAN	4	PHYSICIAN
AEROSPACE MEDICINE	5	AEROSPACE MEDICINE
AEROSPACE MEDICINE PHYSICIAN	6	AEROSPACE MEDICINE
PHYSICIAN		
ALLERGIST	7	ALLERGIST
ALLERGY	8	ALLERGY
ANESTHESIOLOGIST	9	ANESTHESIOLOGIST
ANESTHESIOLOGY	10	ANESTHESIOLOGY
ANESTHESIOLOGY RESIDENT	11	ANESTHESIOLOGY RESIDENT
AUDIOLOGIST	12	AUDIOLOGIST
AUDIOLOGY	13	AUDIOLOGY
CARDIAC SURGEON	14	CARDIAC SURGEON
CARDIOLOGIST	15	CARDIOLOGIST
CARDIOLOGIST, PEDIATRIC	16	CARDIOLOGIST, PEDIATRIC
CARDIOLOGY	17	CARDIOLOGY
CERTIFIED NURSE MIDWIFE	18	CERTIFIED NURSE MIDWIFE
CLINICAL NURSE - ENTRY LEVEL FOR	19	CLINICAL NURSE - ENTRY
LEVEL FOR		
NURSE PRACTITIONER	19	NURSE PRACTITIONER
CLINICAL PSYCHOLOGIST	20	CLINICAL PSYCHOLOGIST
COLON & RECTAL SURGEON	21	COLON & RECTAL SURGEON
COMMUNITY HEALTH	22	COMMUNITY HEALTH
COMMUNITY HEALTH NURSE	23	COMMUNITY HEALTH NURSE
CONTRACT CHIROPRACTOR	24	CONTRACT CHIROPRACTOR
CONTRACT PHYSICIAN (NOT ON	25	CONTRACT PHYSICIAN (NOT ON
CONSULTANT LIST)	25	CONSULTANT LIST)
CORPSMAN/TECHNICIAN	26	CORPSMAN/TECHNICIAN
CRITICAL CARE MEDICINE	27	CRITICAL CARE MEDICINE
DERMATOLOGIST	28	DERMATOLOGIST
DERMATOLOGIST RESIDENT	29	DERMATOLOGIST RESIDENT
DERMATOLOGY	30	DERMATOLOGY
DIAGNOSTIC RADIOLOGIST	31	DIAGNOSTIC RADIOLOGIST
DIETETICS	32	DIETETICS
DIETICIAN-NUTRITIONIST	33	DIETICIAN-NUTRITIONIST
DRUG ABUSE COUNSELOR	34	DRUG ABUSE COUNSELOR
EMERGENCY MEDICINE	35	EMERGENCY MEDICINE
EMERGENCY PHYSICIAN	36	EMERGENCY PHYSICIAN
EMERGENCY PHYSICIAN RESIDENT	37	EMERGENCY PHYSICIAN
RESIDENT		
ENDOCRINOLOGIST	38	ENDOCRINOLOGIST
ENDOCRINOLOGIST, OB/GYN	39	ENDOCRINOLOGIST, OB/GYN
ENDOCRINOLOGIST, PEDIATRIC	40	ENDOCRINOLOGIST, PEDIATRIC
ENDOCRINOLOGY	41	ENDOCRINOLOGY
FAMILY PRACTICE PHYSICIAN	42	FAMILY PRACTICE PHYSICIAN
FAMILY PRACTICE PHYSICIAN	43	FAMILY PRACTICE PHYSICIAN
RESIDENT	43	RESIDENT

FAMILY PRACTICE/PRIMARY CARE	44	FAMILY PRACTICE/PRIMARY CARE
GASTROENTEROLOGIST	45	GASTROENTEROLOGIST
GASTROENTEROLOGIST, PEDIATRIC	46	GASTROENTEROLOGIST, PEDIATRIC
GASTROENTEROLOGY	47	GASTROENTEROLOGY
GENERAL MEDICAL OFFICER	48	GENERAL MEDICAL OFFICER
GENERAL MEDICINE	49	GENERAL MEDICINE
GENERAL SURGEON	50	GENERAL SURGEON
GYNECOLOGY	51	GYNECOLOGY
HAND SURGEON	52	HAND SURGEON
HEMATOLOGIST	53	HEMATOLOGIST
HEMATOLOGIST, PEDIATRIC	54	HEMATOLOGIST, PEDIATRIC
HEMATOLOGY	55	HEMATOLOGY
IMMUNOLOGY	56	IMMUNOLOGY
INFECTIOUS DISEASE	57	INFECTIOUS DISEASE
INFECTIOUS DISEASES PHYSICIAN	58	INFECTIOUS DISEASES PHYSICIAN
INFECTIOUS DISEASES PHYSICIAN, PEDIATRIC	59	INFECTIOUS DISEASES PHYSICIAN, PEDIATRIC
INTERNAL MEDICINE	60	INTERNAL MEDICINE
INTERNAL MEDICINE CONSULTANT	61	INTERNAL MEDICINE CONSULTANT
INTERNAL MEDICINE RESIDENT	62	INTERNAL MEDICINE RESIDENT
INTERNIST	63	INTERNIST
MEDICAL CHEMIST	64	MEDICAL CHEMIST
NEPHROLOGIST	65	NEPHROLOGIST
NEPHROLOGIST, PEDIATRIC	66	NEPHROLOGIST, PEDIATRIC
NEPHROLOGY	67	NEPHROLOGY
NEUROLOGICAL SURGEON	68	NEUROLOGICAL SURGEON
NEUROLOGIST	69	NEUROLOGIST
NEUROLOGIST RESIDENT	70	NEUROLOGIST RESIDENT
NEUROLOGIST, PEDIATRIC	71	NEUROLOGIST, PEDIATRIC
NEUROLOGY	72	NEUROLOGY
NURSE MIDWIFE - ENTRY LEVEL	73	NURSE MIDWIFE - ENTRY LEVEL
NURSE, GENERAL DUTY	74	NURSE, GENERAL DUTY
NURSING	75	NURSING
NUTRITION	76	NUTRITION
OB/GYN	77	OB/GYN
OB/GYN NURSE PRACTITIONER	78	OB/GYN NURSE PRACTITIONER
OB/GYN RESIDENT	79	OB/GYN RESIDENT
OBSTETRICIAN & GYNECOLOGIST	80	OBSTETRICIAN & GYNECOLOGIST (OB/GYN)
OBSTETRICS	81	OBSTETRICS
OCCUPATIONAL HEALTH	82	OCCUPATIONAL HEALTH
OCCUPATIONAL MEDICINE PHYSICIAN	83	OCCUPATIONAL MEDICINE PHYSICIAN
OCCUPATIONAL THERAPIST	84	OCCUPATIONAL THERAPIST
ONCOLOGIST	85	ONCOLOGIST
ONCOLOGY	86	ONCOLOGY
OPHTHALMOLOGIST	87	OPHTHALMOLOGIST

OPHTHALMOLOGY	88	OPHTHALMOLOGY
OPHTHALMOLOGY RESIDENT	89	OPHTHALMOLOGY RESIDENT
OPTOMETRIST	90	OPTOMETRIST
OPTOMETRY	91	OPTOMETRY
ORTHOPEDIC RESIDENT	92	ORTHOPEDIC RESIDENT
ORTHOPEDIC SURGEON	93	ORTHOPEDIC SURGEON
ORTHOPEDICS	94	ORTHOPEDICS
OTHER BIOMEDICAL SPECIALIST SPECIALIST	95	OTHER BIOMEDICAL
OTHER CONSULTANT	96	OTHER CONSULTANT
OTHER PROVIDER (OFFICER)	97	OTHER PROVIDER (OFFICER)
OTORHINOLARYNGOLOGIST	98	OTORHINOLARYNGOLOGIST
OTORHINOLARYNGOLOGY	99	OTORHINOLARYNGOLOGY
OTORHINOLARYNGOLOGY RESIDENT RESIDENT	100	OTORHINOLARYNGOLOGY
PEDIATRIC MEDICINE CONSULTANT CONSULTANT	101	PEDIATRIC MEDICINE
PEDIATRIC NURSE PRACTITIONER PRACTITIONER	102	PEDIATRIC NURSE
PEDIATRIC RESIDENT	103	PEDIATRIC RESIDENT
PEDIATRIC SURGEON	104	PEDIATRIC SURGEON
PEDIATRICIAN	105	PEDIATRICIAN
PEDIATRICS	106	PEDIATRICS
PEDIATRICS, DEVELOPMENTAL	107	PEDIATRICS, DEVELOPMENTAL
PERINATOLOGIST	108	PERINATOLOGIST
PERIPHERAL VASCULAR SURGEON SURGEON	109	PERIPHERAL VASCULAR
PHYSICAL MEDICINE & REHABILITATION	110	PHYSICAL MEDICINE & REHABILITATION
PHYSICAL MEDICINE PHYSICIAN PHYSICIAN	111	PHYSICAL MEDICINE
PHYSICAL THERAPIST	112	PHYSICAL THERAPIST
PHYSICIAN ASSISTANT	113	PHYSICIAN ASSISTANT
PLASTIC SURGEON	114	PLASTIC SURGEON
PLASTIC SURGERY RESIDENT	115	PLASTIC SURGERY RESIDENT
PODIATRIST	116	PODIATRIST
PODIATRY	117	PODIATRY
PREVENTIVE MEDICINE	118	PREVENTIVE MEDICINE
PREVENTIVE MEDICINE PHYSICIAN PHYSICIAN	119	PREVENTIVE MEDICINE
PRIMARY CARE NURSE PRACTITIONER PRACTITIONER	120	PRIMARY CARE NURSE
- ENTRY	120	- ENTRY
PRIMARY CARE NURSE PRACTITIONER PRACTITIONER	121	PRIMARY CARE NURSE
QUALIFIED	121	QUALIFIED
PROCTOLOGY	122	PROCTOLOGY
PSYCHIATRIST	123	PSYCHIATRIST
PSYCHIATRY	124	PSYCHIATRY
PSYCHOLOGY	125	PSYCHOLOGY
PSYCHOLOGY SOCIAL WORKER	126	PSYCHOLOGY SOCIAL WORKER
PULMONARY DISEASE	127	PULMONARY DISEASE
PULMONARY DISEASES PHYSICIAN PHYSICIAN	128	PULMONARY DISEASES

PULMONARY DISEASES PHYSICIAN, PHYSICIAN,	129	PULMONARY DISEASES
PEDIATRIC	129	PEDIATRIC
RADIATION THERAPIST	130	RADIATION THERAPIST
RADIOLOGIST	131	RADIOLOGIST
RADIOLOGY	132	RADIOLOGY
RADIOLOGY RESIDENT	133	RADIOLOGY RESIDENT
RESIDENT SURGEON	134	RESIDENT SURGEON
RHEUMATOLOGIST	135	RHEUMATOLOGIST
RHEUMATOLOGY	136	RHEUMATOLOGY
SLEEP DISORDERS	137	SLEEP DISORDERS
SPEECH THERAPIST	138	SPEECH THERAPIST
SURGERY	139	SURGERY
SURGERY CONSULTANT	140	SURGERY CONSULTANT
THERAPY, OCCUPATIONAL	141	THERAPY, OCCUPATIONAL
THERAPY, PHYSICAL	142	THERAPY, PHYSICAL
THORACIC SURGEON	143	THORACIC SURGEON
THORACIC SURGERY	144	THORACIC SURGERY
UNKNOWN	145	UNKNOWN
UROLOGIST	146	UROLOGIST
UROLOGY	147	UROLOGY
UROLOGY CONSULTANT	148	UROLOGY CONSULTANT
UROLOGY RESIDENT	149	UROLOGY RESIDENT

Appendix C

Provider Class

ADMIN-NURSE	1 ADMIN-NURSE
ADULT NURSE PRAC	2 ADULT NURSE PRAC
ADVANCED ALLIED	3 ADVANCED ALLIED
ALLERGIST	4 ALLERGIST
ANESTHESIA RESIDENT	5 ANESTHESIA RESIDENT
ANESTHESIOLOGIST	6 ANESTHESIOLOGIST
AUDIOLOGIST	7 AUDIOLOGIST
AUDIOLOGIST 2Z	8 AUDIOLOGIST 2Z
AUDIOLOGY TECH	9 AUDIOLOGY TECH
BAMC CORPSMAN/TECHNICIAN	10 BAMC CORPSMAN/TECHNICIAN
BAMC PA AND NP	11 BAMC PA AND NP
BAMC RESIDENT/FELLOW	12 BAMC RESIDENT/FELLOW
CARDIOLOGIST	13 CARDIOLOGIST
CARDIOLOGY FELLOW	14 CARDIOLOGY FELLOW
CARDIOTHORACIC SURGEON	15 CARDIOTHORACIC SURGEON
CASE MANAGER	16 CASE MANAGER
CERTIFIED NURSE MIDWIFE	17 CERTIFIED NURSE MIDWIFE
CERTIFIED NURSING ASSISTANT	18 CERTIFIED NURSING ASSISTANT
CHIROPRACTOR	19 CHIROPRACTOR
CLERK	20 CLERK
CLIN VISIT	21 CLIN VISIT
CLINICAL CLERK	22 CLINICAL CLERK
CLINICAL DIETICIAN	23 CLINICAL DIETICIAN
CLINICAL NURSE	24 CLINICAL NURSE
CLINICAL NURSE SPECIALIST	25 CLINICAL NURSE SPECIALIST
CLINICAL PHARMACIST	26 CLINICAL PHARMACIST
COMMUNITY HEALTH NURSE	27 COMMUNITY HEALTH NURSE
CONTRACT CHIROPRACTOR	28 CONTRACT CHIROPRACTOR
CONTRACT PEDIATRICIAN	29 CONTRACT PEDIATRICIAN
CONTRACT/PAR	30 CONTRACT/PAR
COUNTER SIGNING PHYSICIAN	31 COUNTER SIGNING PHYSICIAN
DEPLOYED PA	32 DEPLOYED PA
DEPLOYED PHYSICIAN	33 DEPLOYED PHYSICIAN
DERMATOLOGIST	34 DERMATOLOGIST
DERMATOLOGY RESIDENT	35 DERMATOLOGY RESIDENT
DIET TECHNICIAN	36 DIET TECHNICIAN
DIETICIAN	37 DIETICIAN
DIETICIAN 2Z	38 DIETICIAN 2Z
DIETICIAN FE	39 DIETICIAN FE
DIETITIAN	40 DIETITIAN
DIETITIAN CREDENTIALED	41 DIETITIAN CREDENTIALED
DO	42 DO
EMER MED PHYSICIAN ASSISTANT	43 EMER MED PHYSICIAN ASSISTANT
EMERGENCY MEDICINE PHYSICIAN	44 EMERGENCY MEDICINE PHYSICIAN
EMERGENCY PHYSICIAN	45 EMERGENCY PHYSICIAN
ENDOCRINOLOGIST	46 ENDOCRINOLOGIST
ENT RESIDENT	47 ENT RESIDENT
ER MEDICINE RESIDENT	48 ER MEDICINE RESIDENT
FAMILY NURSE PRAC	49 FAMILY NURSE PRAC
FAMILY NURSE PRACTITIONER	50 FAMILY NURSE PRACTITIONER

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FAMILY PHYSICIAN	51 FAMILY PHYSICIAN
FAMILY PRACTICE INTERN	52 FAMILY PRACTICE INTERN
FAMILY PRACTICE PHYSICIAN	53 FAMILY PRACTICE PHYSICIAN
FAMILY PRACTICE PHYSICIAN EVAN	54 FAMILY PRACTICE PHYSICIAN
EVAN	
FAMILY PRACTICE RESIDENT	55 FAMILY PRACTICE RESIDENT
FAMILY PRACTITIONER	56 FAMILY PRACTITIONER
FELLOW	57 FELLOW
FLIGHT SURGEON	58 FLIGHT SURGEON
FP NURSE PRACTITIONER	59 FP NURSE PRACTITIONER
GASTROENTEROLOGIST	60 GASTROENTEROLOGIST
GASTROENTEROLOGY FELLOW	61 GASTROENTEROLOGY FELLOW
GASTROENTEROLOGY RESIDENT	62 GASTROENTEROLOGY RESIDENT
GEN SURG	63 GEN SURG
GENERAL MEDICAL OFFICER	64 GENERAL MEDICAL OFFICER
GENERAL PHYSICIAN	65 GENERAL PHYSICIAN
GENERAL SURGEON	66 GENERAL SURGEON
GENERAL SURGERY	67 GENERAL SURGERY
GENERAL SURGERY RESIDENT	68 GENERAL SURGERY RESIDENT
GYNECOLOGIST	69 GYNECOLOGIST
HCP	70 HCP
HEAD NURSE	71 HEAD NURSE
HEALTH SERVICES TECHNICIAN	72 HEALTH SERVICES TECHNICIAN
HEALTH TECHNICIAN 4Z	73 HEALTH TECHNICIAN 4Z
HEM/ONC FELLOW	74 HEM/ONC FELLOW
HEMATOLOGIST/ONCOLOGIST	75 HEMATOLOGIST/ONCOLOGIST
INFECTIOUS DISEASE SPECIALIST	76 INFECTIOUS DISEASE
SPECIALIST	
INTERN	77 INTERN
INTERNAL MEDICINE	78 INTERNAL MEDICINE
INTERNAL MEDICINE RESIDENT	79 INTERNAL MEDICINE RESIDENT
INTERNIST	80 INTERNIST
INTERNIST/PEDIATRICIAN	81 INTERNIST/PEDIATRICIAN
LICENSED PRACTICAL NURSE	82 LICENSED PRACTICAL NURSE
LICENSED PRACTICAL NURSE 4L	83 LICENSED PRACTICAL NURSE 4L
LPN	84 LPN
LVN (STANDARD)	85 LVN (STANDARD)
LVN SPECIAL	86 LVN SPECIAL
LVN/LPN/91C	87 LVN/LPN/91C
MAMC_AUDIOLOGIST	88 MAMC_AUDIOLOGIST
MCP NETWORK PROVIDER	89 MCP NETWORK PROVIDER
MED NURSE PRACTITIONER	90 MED NURSE PRACTITIONER
MEDICAL CLERK	91 MEDICAL CLERK
MEDICAL CLERK 5C	92 MEDICAL CLERK 5C
MEDICAL SPECIALIST	93 MEDICAL SPECIALIST
MEDICAL STUDENT 1Z	94 MEDICAL STUDENT 1Z
MEDICAL TECHNICIAN	95 MEDICAL TECHNICIAN
MEDICINE INTERN	96 MEDICINE INTERN
MEDICINE RESIDENT	97 MEDICINE RESIDENT
NA/MED SPECIALIST/91B	98 NA/MED SPECIALIST/91B
NEPHROLOGIST	99 NEPHROLOGIST
NEUROLOGIST	100 NEUROLOGIST
NEUROSURGEON	101 NEUROSURGEON
NURSE	102 NURSE
NURSE ASSISTANT	103 NURSE ASSISTANT

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NURSE CONSULTANT	104 NURSE CONSULTANT
NURSE MIDWIFE	105 NURSE MIDWIFE
NURSE MIDWIFE 2M	106 NURSE MIDWIFE 2M
NURSE PRACTIONER	107 NURSE PRACTIONER
NURSE PRACTITIONER	108 NURSE PRACTITIONER
NURSE PRACTITIONER 2N	109 NURSE PRACTITIONER 2N
NURSE,LPN	110 NURSE,LPN
NURSE,RN	111 NURSE,RN
NURSING ASSISTANT	112 NURSING ASSISTANT
NURSING ASSISTANT 4A	113 NURSING ASSISTANT 4A
NUTRITIONIST	114 NUTRITIONIST
OB NURSE PRACTITIONER	115 OB NURSE PRACTITIONER
OB/GYN	116 OB/GYN
OB/GYN INTERN	117 OB/GYN INTERN
OB/GYN NURSE PRAC	118 OB/GYN NURSE PRAC
OB/GYN NURSE PRACT	119 OB/GYN NURSE PRACT
OB/GYN RESIDENT	120 OB/GYN RESIDENT
OBSTETRICIAN/GYNECOLOGIST	121 OBSTETRICIAN/GYNECOLOGIST
OBSTETRICS & GYNECOLOGY	122 OBSTETRICS & GYNECOLOGY
OCC HLTH TECH	123 OCC HLTH TECH
OCCUPATIONAL HEALTH NURSE	124 OCCUPATIONAL HEALTH NURSE
OCCUPATIONAL THERAPIST-MSE	125 OCCUPATIONAL THERAPIST-MSE
OCCUPATIONAL THERAPIST	126 OCCUPATIONAL THERAPIST
OCCUPATIONAL THERAPIST CRED	127 OCCUPATIONAL THERAPIST CRED
ONCOLOGIST	128 ONCOLOGIST
OPHTHALMOLOGIST	129 OPHTHALMOLOGIST
OPTHALMOLOGIST	130 OPTHALMOLOGIST
OPTHALMOLOGY	131 OPTHALMOLOGY
OPTOMETRIST	132 OPTOMETRIST
OPTOMETRIST 2Z	133 OPTOMETRIST 2Z
OPTOMETRY	134 OPTOMETRY
OPTOMETRY TECH	135 OPTOMETRY TECH
ORDERING CLERK	136 ORDERING CLERK
ORTHOPAEDIC SURGEON	137 ORTHOPAEDIC SURGEON
ORTHOPEDIC	138 ORTHOPEDIC
ORTHOPEDIC INTERN	139 ORTHOPEDIC INTERN
ORTHOPEDIC SURGEON	140 ORTHOPEDIC SURGEON
ORTHOPEDICS RESIDENT	141 ORTHOPEDICS RESIDENT
OSTEOPATH	142 OSTEOPATH
OT INTERN	143 OT INTERN
OTOLARYNGOLOGIST	144 OTOLARYNGOLOGIST
OTOLARYNGOLOGY	145 OTOLARYNGOLOGY
OTOLARYNGOLOGY RESIDENT	146 OTOLARYNGOLOGY RESIDENT
OTORHINOLARYNGOLOGIST	147 OTORHINOLARYNGOLOGIST
OUTSIDE PROVIDER	148 OUTSIDE PROVIDER
PC NURSE PRACTITIONER	149 PC NURSE PRACTITIONER
PEDIATRIC	150 PEDIATRIC
PEDIATRIC NURSE PRAC	151 PEDIATRIC NURSE PRAC
PEDIATRIC NURSE PRACTITIONER	152 PEDIATRIC NURSE PRACTITIONER
PEDIATRIC RESIDENT	153 PEDIATRIC RESIDENT
PEDIATRICIAN	154 PEDIATRICIAN
PEDIATRICS INTERN	155 PEDIATRICS INTERN
PEDIATRICS RESIDENT	156 PEDIATRICS RESIDENT

PHARM-D	157 PHARM-D
PHARMACIST	158 PHARMACIST
PHARMACIST 2Z	159 PHARMACIST 2Z
PHYSIATRIST	160 PHYSIATRIST
PHYSICAL MEDICINE	161 PHYSICAL MEDICINE
PHYSICAL THERAPIST-HCP	162 PHYSICAL THERAPIST-HCP
PHYSICAL THERAPIST - HCP	163 PHYSICAL THERAPIST - HCP
PHYSICAL THERAPIST	164 PHYSICAL THERAPIST
PHYSICAL THERAPIST + EXTRA	165 PHYSICAL THERAPIST + EXTRA
PHYSICAL THERAPIST 2Z	166 PHYSICAL THERAPIST 2Z
PHYSICAL THERAPIST ASSISTANT	167 PHYSICAL THERAPIST ASSISTANT
PHYSICAL THERAPY ASSISTANT	168 PHYSICAL THERAPY ASSISTANT
PHYSICAL THERAPY TECH	169 PHYSICAL THERAPY TECH
PHYSICIAN	170 PHYSICIAN
PHYSICIAN ASSISTANT	171 PHYSICIAN ASSISTANT
PHYSICIAN ASSISTANT 2Z	172 PHYSICIAN ASSISTANT 2Z
PHYSICIAN ASSISTANT RESIDENT	173 PHYSICIAN ASSISTANT RESIDENT
PHYSICIAN DO	174 PHYSICIAN DO
PHYSICIAN FELLOW 1F	175 PHYSICIAN FELLOW 1F
PHYSICIAN INTERN 1N	176 PHYSICIAN INTERN 1N
PHYSICIAN MD	177 PHYSICIAN MD
PHYSICIAN RESIDENT 1R	178 PHYSICIAN RESIDENT 1R
PHYSICIAN STAFF 1P	179 PHYSICIAN STAFF 1P
PLASTIC SURGEON	180 PLASTIC SURGEON
PODIATIST	181 PODIATIST
PODIATRIST	182 PODIATRIST
PODIATRIST 2Z	183 PODIATRIST 2Z
PRACTICAL NURSE	184 PRACTICAL NURSE
PRI CARE NURSE PRACTITIONER	185 PRI CARE NURSE PRACTITIONER
PRIVILEGED CLERK	186 PRIVILEGED CLERK
PRIVILEGED NURSE	187 PRIVILEGED NURSE
PROVIDER	188 PROVIDER
PSYCHIATRY RESIDENT	189 PSYCHIATRY RESIDENT
PSYCHOLOGIST	190 PSYCHOLOGIST
PSYCHOLOGIST 2Z	191 PSYCHOLOGIST 2Z
PT TECH	192 PT TECH
PULMONARY FELLOW	193 PULMONARY FELLOW
PULMONOLOGIST	194 PULMONOLOGIST
RADIOLOGIST	195 RADIOLOGIST
RADIOLOGIST 1P	196 RADIOLOGIST 1P
REGISTERED DIETITIANS	197 REGISTERED DIETITIANS
REGISTERED NURSE	198 REGISTERED NURSE
REGISTERED NURSE (RN)	199 REGISTERED NURSE (RN)
REGISTERED NURSE 3R	200 REGISTERED NURSE 3R
RESIDENT	201 RESIDENT
RESIDENT PHYSICIAN	202 RESIDENT PHYSICIAN
RHEUMATOLOGIST	203 RHEUMATOLOGIST
RN	204 RN
SONOGRAPHER	205 SONOGRAPHER
SPECIAL CLASS (DOCTOR)	206 SPECIAL CLASS (DOCTOR)
SPECIAL CLASS (NURSE)	207 SPECIAL CLASS (NURSE)
SPECIAL CLASS OPTOMETRIST	208 SPECIAL CLASS OPTOMETRIST
SPEECH PATHOLOGIST	209 SPEECH PATHOLOGIST

SPEECH PATHOLOGY	210 SPEECH PATHOLOGY
SPEECH THERAPIST	211 SPEECH THERAPIST
STAFF ANESTHESIOLOGIST	212 STAFF ANESTHESIOLOGIST
STAFF AUDIOLOGY & SPEECH	213 STAFF AUDIOLOGY & SPEECH
STAFF CARDIOLOGIST	214 STAFF CARDIOLOGIST
STAFF CARDIOTHORACIC SURGEON	215 STAFF CARDIOTHORACIC SURGEON
STAFF DERMATOLOGIST	216 STAFF DERMATOLOGIST
STAFF ENDOCRINOLOGIST	217 STAFF ENDOCRINOLOGIST
STAFF ER MED PHYSICIAN	218 STAFF ER MED PHYSICIAN
STAFF FAM PRACTICE PHYSICIAN	219 STAFF FAM PRACTICE PHYSICIAN
STAFF GASTROENTEROLOGIST	220 STAFF GASTROENTEROLOGIST
STAFF GENERAL SURGEON	221 STAFF GENERAL SURGEON
STAFF HEM/ONC	222 STAFF HEM/ONC
STAFF INFECTIOUS DISEASE DR	223 STAFF INFECTIOUS DISEASE DR
STAFF INTERNIST	224 STAFF INTERNIST
STAFF NURSE PRACTITIONER	225 STAFF NURSE PRACTITIONER
STAFF OB/GYN PHYSICIAN	226 STAFF OB/GYN PHYSICIAN
STAFF OCCUPATIONAL THERAPIST	227 STAFF OCCUPATIONAL THERAPIST
STAFF OPHTHALMOLOGIST	228 STAFF OPHTHALMOLOGIST
STAFF ORTHOPAEDIC SURGEON	229 STAFF ORTHOPAEDIC SURGEON
STAFF PEDIATRICIAN	230 STAFF PEDIATRICIAN
STAFF PHYSICAL THERAPIST	231 STAFF PHYSICAL THERAPIST
STAFF PHYSICIAN	232 STAFF PHYSICIAN
STAFF PHYSICIAN ASSISTANT	233 STAFF PHYSICIAN ASSISTANT
STAFF PULMONOLOGIST	234 STAFF PULMONOLOGIST
STAFF RADIATION THERAPIST	235 STAFF RADIATION THERAPIST
STAFF RADIOLOGIST	236 STAFF RADIOLOGIST
STAFF RHEUMATOLOGIST	237 STAFF RHEUMATOLOGIST
STAFF UROLOGIST	238 STAFF UROLOGIST
SURGEON	239 SURGEON
SURGERY INTERN	240 SURGERY INTERN
SURGERY RESIDENT	241 SURGERY RESIDENT
TECHNICIAN	242 TECHNICIAN
TECHNOLOGIST 2Z	243 TECHNOLOGIST 2Z
TMC PHYSICIAN ASSISTANT	244 TMC PHYSICIAN ASSISTANT
TRANSITIONAL INTERN	245 TRANSITIONAL INTERN
TRIAGE NURSE	246 TRIAGE NURSE
UROLOGIST	247 UROLOGIST
UROLOGY RESIDENT	248 UROLOGY RESIDENT
UTHSC RESIDENT	249 UTHSC RESIDENT
VASCULAR SURGEON	250 VASCULAR SURGEON
VOLUNTEER PHYSICIAN	251 VOLUNTEER PHYSICIAN
WARD CLERK	252 WARD CLERK
ZZPHYSICIAN	253 ZZPHYSICIAN

Appendix D

SPSS Syntax

The cases contain the date of birth and date of appointment. The date of birth variable is labeled "pat_dob" and date of appointment is labeled "apptdate". The date of birth is subtracted from the date of appointment to get age at time of appointment. The "Age" variable can then be recoded into age group categories and code 1 if present, 0 otherwise.

1. COMPUTE YRMODA(XDATE.YEAR(pat_dob), XDATE.MONTH(pat_dob), XDATE.DAY(pat_dob)) into target variable "Birthdate".
2. COMPUTE YRMODA(XDATE.YEAR(apptdate), XDATE.MONTH(apptdate), XDATE.DAY(apptdate)) into target variable "Appt_date".
3. COMPUTE (Appt_date – Birthdate) / 365 into target variable "Age"
4. RECODE Age (0 THRU 17 = 1) (else = 0) INTO Age_17andBelow.
   RECODE Age (18 THRU 25 =1) (else =0) INTO Age_18-24.
   RECODE Age (26 THRU 35 =1) (else = 0) INTO Age_25-34.
   RECODE Age (36THRU 45 =1) (else = 0) INTO Age_35-44.
   RECODE Age (46 THRU 64 =1) (else = 0) INTO Age_45-64.
   RECODE Age (65 THRU HI = 1) (else = 0) INTO Age_65orMore.

The variable "prov_rnk" was recoded into two variables Civillian_Prov and Mil_Prov to indicate if provider was military or civilian and Miliary rank was coded into separate rank variable 01 thru 06 and Civ. In 459 cases the rank was unkown, so these were excluded.

RECODE prov_rnk (ACIV =1) (FCIV =1) (NCIV=1) (XCIV=1) (ELSE=0) INTO

Mil_Prov

Appendix E

Patient Categories

Old Value	New Value	Value Label
ARMY SECT DESIGNEE (FMR PAY)	2	ARMY SECT DESIGNEE (FMR PAY)
ARMY SECT DESIGNEE (FRR PAY)	3	ARMY SECT DESIGNEE (FRR PAY)
ARMY SECT DESIGNEE (NO PAY)	4	ARMY SECT DESIGNEE (NO PAY)
CIV EMPL/OTH FED AGEN/NON-DOD,	5	CIV EMPL/OTH FED AGEN/NON-DOD,
NEC	5	NEC
CIV EMPLOYEE ARMY NATL GUARD	6	CIV EMPLOYEE ARMY NATL GUARD
CIV FACULTY U OF HEALTH SCIENCES	7	CIV FACULTY U OF HEALTH SCIENCES
CIVILIAN - DISASTER (FEMA)	8	CIVILIAN - DISASTER (FEMA)
CIVILIAN - HUMANITARIAN	9	CIVILIAN - HUMANITARIAN
CIVILIAN EMERGENCY CARE	10	CIVILIAN EMERGENCY CARE
COMMERCE DEPT EMPLOYEE	11	COMMERCE DEPT EMPLOYEE
CONTRACT EMPLOYEE AND FAM MBR	12	CONTRACT EMPLOYEE AND FAM MBR
DOD EMPL OCCUPATIONAL HEALTH	13	DOD EMPL OCCUPATIONAL HEALTH
DOD EMPLOYEE REMOTE AREA IN US	14	DOD EMPLOYEE REMOTE AREA IN US
DOD SCHOOL TEACHER OUTSIDE THE	15	DOD SCHOOL TEACHER OUTSIDE THE
US	15	US
DOD/VA SHARING AGREEMENT	16	DOD/VA SHARING AGREEMENT
EMERGENCY CARE	17	EMERGENCY CARE
EXCHANGE EMP OCONUS	18	EXCHANGE EMP OCONUS
FAA AIR TRF CONTROLLER PHYS EXAM	19	FAA AIR TRF CONTROLLER PHYS EXAM
FAM MBR COMM DEPT EMPL, BUR PUB	20	FAM MBR COMM DEPT EMPL, BUR PUB
RDS	20	RDS
FAM MBR DOD SCHL TEACHR OUTSIDE	21	FAM MBR DOD SCHL TEACHR OUTSIDE
US	21	US
FAM MBR EXCHANGE EMP OCONUS	22	FAM MBR EXCHANGE EMP OCONUS
FAM MBR FED EMPLYE ALCH AND DRUG	23	FAM MBR FED EMPLYE ALCH AND DRUG
RE	23	RE
FAM MBR NON-DOD FED AGENCY	24	FAM MBR NON-DOD FED AGENCY
FAM MBR OTHER DOD EMPL OUTSIDE	25	FAM MBR OTHER DOD EMPL OUTSIDE
US	25	US
FED EMPLOYEE ALCH AND DRUG REHAB	26	FED EMPLOYEE ALCH AND DRUG REHAB
FED GOVT EMPLOYEE IN REMOTE	27	FED GOVT EMPLOYEE IN REMOTE

AREAS	27	AREAS
FMS NATO - ITO AGENCY	28	FMS NATO - ITO AGENCY
FMS NATO - ITO INDIVIDUAL	29	FMS NATO - ITO INDIVIDUAL
FMS NATO CIVILIAN - ITO AGENCY	30	FMS NATO CIVILIAN - ITO AGENCY
FMS NON-NATO MIL/CIV - ITO AGENCY	31	FMS NON-NATO MIL/CIV - ITO AGENCY
FMS NON-NATO MIL/CIV - ITO IND	32	FMS NON-NATO MIL/CIV - ITO IND
FOREIGN CIVILIAN	33	FOREIGN CIVILIAN
GSA EMPLOYEE	34	GSA EMPLOYEE
GUANTANAMO BAY	35	GUANTANAMO BAY
IMET NATO	36	IMET NATO
IMET NON-NATO MILITARY/CIVILIAN	37	IMET NON-NATO MILITARY/CIVILIAN
JUSTICE DEPT EMPLOYEE	38	JUSTICE DEPT EMPLOYEE
KATUSA	39	KATUSA
MERCHANT MARINE ACAD APPLICANT	40	MERCHANT MARINE ACAD APPLICANT
NAF EMPLOYEE OCONUS	41	NAF EMPLOYEE OCONUS
NATO FAM MBR-CONUS	42	NATO FAM MBR-CONUS
NATO FAM MBR-OCONUS	43	NATO FAM MBR-OCONUS
NATO FAM MBR IMET/FMS - ITO ITO	44	NATO FAM MBR IMET/FMS - ITO AGENCY
NATO FAM MBR IMET/FMS - ITO IND	45	NATO FAM MBR IMET/FMS - ITO IND
NATO MILITARY-CONUS	46	NATO MILITARY-CONUS
NATO MILITARY-OCONUS	47	NATO MILITARY-OCONUS
NATO RECIP AGREE - FAM MBR	48	NATO RECIP AGREE - FAM MBR
NATO RECIP AGREE	49	NATO RECIP AGREE
NOAA ACTIVE DUTY	50	NOAA ACTIVE DUTY
NOAA FAM MBR AD	51	NOAA FAM MBR AD
NOAA FAM MBR DECEASED AD	52	NOAA FAM MBR DECEASED AD
NOAA FAM MBR DECEASED RETIRED	53	NOAA FAM MBR DECEASED RETIRED
NOAA FAM MBR RET	54	NOAA FAM MBR RET
NOAA RET LOS	55	NOAA RET LOS
NOAA RET TDRL	56	NOAA RET TDRL
NOAA UNREMARRIED FRM SPOUSE	57	NOAA UNREMARRIED FRM SPOUSE
NON-NATO FAM MBR IMET/FMS - ITO - ITO	58	NON-NATO FAM MBR IMET/FMS - ITO AGN
NON-NATO FAM MBR IMET/FMS - ITO - ITO	59	NON-NATO FAM MBR IMET/FMS - ITO IND
NON-NATO FAM MBR OF OTHER MILITARY	60	NON-NATO FAM MBR OF OTHER MILITARY
NON-NATO RECIP AGREE - FAM MBR	61	NON-NATO RECIP AGREE - FAM MBR
NON-NATO RECIP AGREE	62	NON-NATO RECIP AGREE
OTHER DOD EMPLOYEE OUTSIDE THE	63	OTHER DOD EMPLOYEE OUTSIDE THE

US	63	US
OTHER FEDERAL AGENCY/DEPT	64	OTHER FEDERAL AGENCY/DEPT
OTHER NON-NATO MILITARY	65	OTHER NON-NATO MILITARY
PAC ISLAND NAT: KOSRAE	66	PAC ISLAND NAT: KOSRAE
PAC ISLAND NAT: MARSHALL ISLANDS	67	PAC ISLAND NAT: MARSHALL ISLANDS
PAC ISLAND NAT: PALAU	68	PAC ISLAND NAT: PALAU
PAC ISLAND NAT: PONAPE	69	PAC ISLAND NAT: PONAPE
PAC ISLAND NAT: YAP	70	PAC ISLAND NAT: YAP
PATIENT NOT ELSEWHERE CLASSIFIED	71	PATIENT NOT ELSEWHERE CLASSIFIED
PEACE CORP VOL,VOL LDR AND EMPL	72	PEACE CORP VOL,VOL LDR AND EMPL
PEACE CORPS APPL - PHYSICAL EXAM	73	PEACE CORPS APPL - PHYSICAL EXAM
PERSONS IN MIL CUSTODY	74	PERSONS IN MIL CUSTODY
PROF EDCT/NEWS AND OIL CO/AUT	75	PROF EDCT/NEWS AND OIL CO/AUT
CARE	75	CARE
PUNITIVE DISCHG EXC, SENT NOT	76	PUNITIVE DISCHG EXC, SENT NOT
EXP	76	EXP
RED CROSS EMPLOYEE OUTSIDE US	77	RED CROSS EMPLOYEE OUTSIDE US
SERVICE HOME - OTHER THAN MIL	78	SERVICE HOME - OTHER THAN MIL
RET	78	RET
SOC SEC BENE MCARE/MCAID/SCHIP	79	SOC SEC BENE MCARE/MCAID/SCHIP
STATE DEPT EMPLOYEE - OUTSIDE US	80	STATE DEPT EMPLOYEE - OUTSIDE US
STATE DEPT FAM MBR - OUTSIDE US	81	STATE DEPT FAM MBR - OUTSIDE US
TRANS DEPT EMPLOYEE	82	TRANS DEPT EMPLOYEE
US CIV EMPL AUTH OCC HLTH	83	US CIV EMPL AUTH OCC HLTH SERVICES
SERVICES	83	
US CIV EMPL OF CONTRACTOR-PHYS	84	US CIV EMPL OF CONTRACTOR-PHYS EXM
EXM	84	
US CUSTOMS SERVICE AGENT	85	US CUSTOMS SERVICE AGENT
USA ACTIVE DUTY ENLISTED	86	USA ACTIVE DUTY ENLISTED
USA ACTIVE DUTY OFFICER	87	USA ACTIVE DUTY OFFICER
USA AD RECRUIT	88	USA AD RECRUIT
USA AD RES-30 DAYS OR LESS, NOT	89	USA AD RES-30 DAYS OR LESS, NOT LOD
LOD	89	
USA AD RES ENLISTED	90	USA AD RES ENLISTED
USA AD RES OFFICER	91	USA AD RES OFFICER
USA APPLICANT/REGISTRANT	92	USA APPLICANT/REGISTRANT
USA DECEASED SPONSOR	93	USA DECEASED SPONSOR
USA FAM MBR AD	94	USA FAM MBR AD
USA FAM MBR DECEASED AD	95	USA FAM MBR DECEASED AD
USA FAM MBR DECEASED RETIRED	96	USA FAM MBR DECEASED RETIRED

USA FAM MBR FAD-TRANS ASSIST ACT ASSIST ACT	97	USA FAM MBR FAD-TRANS
USA FAM MBR RET	98	USA FAM MBR RET
USA FAM MBR UNREMAR FRM SPOUSE SPOUSE	99	USA FAM MBR UNREMAR FRM
USA FRM AD-TRANS ASSISTANCE ACT ASSISTANCE ACT	100	USA FRM AD-TRANS
USA FRM MEMBER-MATERNITY CARE CARE	101	USA FRM MEMBER-MATERNITY
USA NEWBORN OF FRM SERVICE MBR MBR	102	USA NEWBORN OF FRM SERVICE
USA NEWBORN OF SPONSOR'S DAUGHTER	103	USA NEWBORN OF SPONSOR'S DAUGHTER
USA NG-30 DAYS OR LESS, NOT LOD NOT LOD	104	USA NG-30 DAYS OR LESS,
USA NG ENLISTED	105	USA NG ENLISTED
USA NG INACT DUTY TRG - NOT LOD NOT LOD	106	USA NG INACT DUTY TRG -
USA NG INACT DUTY TRG ENL	107	USA NG INACT DUTY TRG ENL
USA NG INACT DUTY TRG OFF	108	USA NG INACT DUTY TRG OFF
USA NG OFFICER	109	USA NG OFFICER
USA RES INACT DUTY TRG - NOT LOD NOT LOD	110	USA RES INACT DUTY TRG -
USA RES INACT DUTY TRG ENLISTED ENLISTED	111	USA RES INACT DUTY TRG
USA RES INACT DUTY TRG OFFICER OFFICER	112	USA RES INACT DUTY TRG
USA RET LOS ENLISTED	113	USA RET LOS ENLISTED
USA RET LOS OFFICER	114	USA RET LOS OFFICER
USA RET PDRL ENLISTED	115	USA RET PDRL ENLISTED
USA RET PDRL OFFICER	116	USA RET PDRL OFFICER
USA RET TDRL ENLISTED	117	USA RET TDRL ENLISTED
USA RET TDRL OFFICER	118	USA RET TDRL OFFICER
USA ROTC	119	USA ROTC
USA UNREMARRIED FRM SPOUSE	120	USA UNREMARRIED FRM SPOUSE
USAF ACADEMY CADET	121	USAF ACADEMY CADET
USAF ACTIVE DUTY	122	USAF ACTIVE DUTY
USAF AD RECRUIT	123	USAF AD RECRUIT
USAF AD RES-30 DAYS OR LESS,NOT LESS,NOT LOD	124	USAF AD RES-30 DAYS OR LOD
USAF AD RES	125	USAF AD RES
USAF APPLICANT/REGISTRANT	126	USAF APPLICANT/REGISTRANT
USAF FAM MBR AD	127	USAF FAM MBR AD
USAF FAM MBR DECEASED AD	128	USAF FAM MBR DECEASED AD
USAF FAM MBR DECEASED RETIRED RETIRED	129	USAF FAM MBR DECEASED
USAF FAM MBR FAD-TRANS ASSIST ASSIST ACT	130	USAF FAM MBR FAD-TRANS ACT
USAF FAM MBR RET	131	USAF FAM MBR RET
USAF FAM MBR UNREMAR FRM SPOUSE SPOUSE	132	USAF FAM MBR UNREMAR FRM
USAF FRM AD-TRANS ASSISTANCE ACT ASSISTANCE ACT	133	USAF FRM AD-TRANS
USAF FRM MEMBER-MATERNITY CARE CARE	134	USAF FRM MEMBER-MATERNITY

USAF NG-30 DAYS OR LESS, NOT LOD NOT LOD	135	USAF NG-30 DAYS OR LESS,
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USAF NG	136	USAF NG
USAF NG INACT DUTY TRG	137	USAF NG INACT DUTY TRG
USAF RES INACT DUTY TRG - NOT NOT LOD	138	USAF RES INACT DUTY TRG - LOD
USAF RES INACT DUTY TRG	139	USAF RES INACT DUTY TRG
USAF RET LOS ENLISTED	140	USAF RET LOS ENLISTED
USAF RET LOS OFFICER	141	USAF RET LOS OFFICER
USAF RET PDRL ENLISTED	142	USAF RET PDRL ENLISTED
USAF RET PDRL OFFICER	143	USAF RET PDRL OFFICER
USAF RET TDRL ENLISTED	144	USAF RET TDRL ENLISTED
USAF RET TDRL OFFICER	145	USAF RET TDRL OFFICER
USAF ROTC	146	USAF ROTC
USAF UNREMARRIED FRM SPOUSE SPOUSE	147	USAF UNREMARRIED FRM
USCG ACADEMY CADET	148	USCG ACADEMY CADET
USCG ACTIVE DUTY	149	USCG ACTIVE DUTY
USCG AD RECRUIT	150	USCG AD RECRUIT
USCG AD RES	151	USCG AD RES
USCG APPLICANT/REGISTRANT	152	USCG APPLICANT/REGISTRANT
USCG AUXILIARY PERSONNEL	153	USCG AUXILIARY PERSONNEL
USCG FAM MBR AD	154	USCG FAM MBR AD
USCG FAM MBR DECEASED AD	155	USCG FAM MBR DECEASED AD
USCG FAM MBR DECEASED RETIRED RETIRED	156	USCG FAM MBR DECEASED
USCG FAM MBR RET	157	USCG FAM MBR RET
USCG RES INACT DUTY TRG	158	USCG RES INACT DUTY TRG
USCG RET LOS	159	USCG RET LOS
USCG RET PDRL	160	USCG RET PDRL
USCG RET TDRL	161	USCG RET TDRL
USCG UNREMARRIED FRM SPOUSE SPOUSE	162	USCG UNREMARRIED FRM
USFHP ENROLLEE - EMERGENCY	163	USFHP ENROLLEE - EMERGENCY
USMA CADET	164	USMA CADET
USMC ACTIVE DUTY	165	USMC ACTIVE DUTY
USMC AD RECRUIT	166	USMC AD RECRUIT
USMC AD RES-30 DAYS OR LESS,NOT LESS,NOT LOD	167	USMC AD RES-30 DAYS OR LOD
USMC AD RES	168	USMC AD RES
USMC APPLICANT/REGISTRANT	169	USMC APPLICANT/REGISTRANT
USMC FAM MBR AD	170	USMC FAM MBR AD
USMC FAM MBR DECEASED AD	171	USMC FAM MBR DECEASED AD
USMC FAM MBR DECEASED RETIRED RETIRED	172	USMC FAM MBR DECEASED
USMC FAM MBR RET	173	USMC FAM MBR RET
USMC FRM MEMBER-MATERNITY CARE CARE	174	USMC FRM MEMBER-MATERNITY
USMC NEWBORN OF SPONSOR'S DAUGHTER	175	USMC NEWBORN OF SPONSOR'S DAUGHTER
USMC RES INACT DUTY TRG	175	USMC RES INACT DUTY TRG
USMC RET LOS ENLISTED	176	USMC RET LOS ENLISTED
	177	

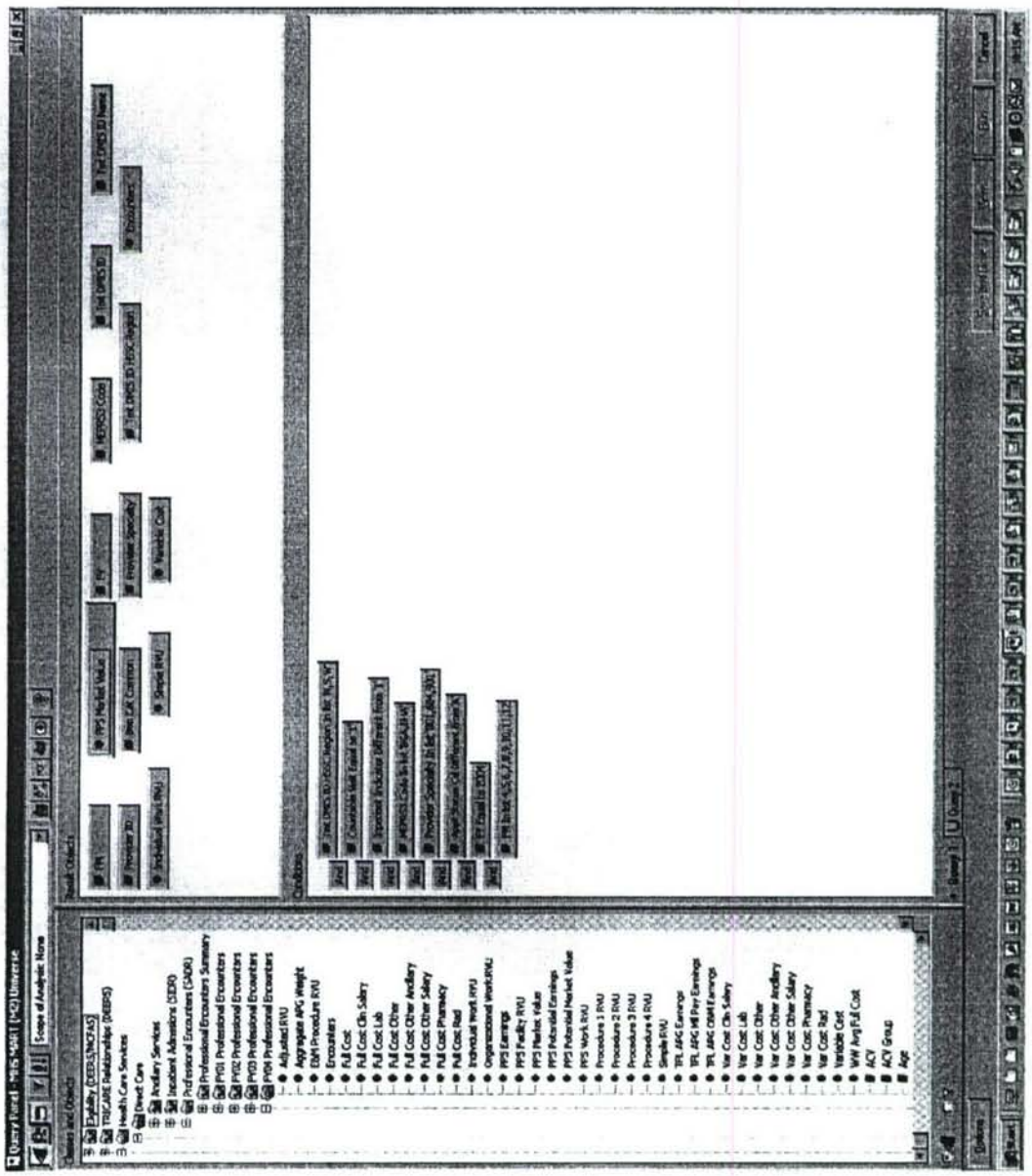
USMC RET LOS OFFICER	178	USMC RET LOS OFFICER
USMC RET PDRL ENLISTED	179	USMC RET PDRL ENLISTED
USMC RET PDRL OFFICER	180	USMC RET PDRL OFFICER
USMC RET TDRL ENLISTED	181	USMC RET TDRL ENLISTED
USMC RET TDRL OFFICER	182	USMC RET TDRL OFFICER
USMC UNREMARRIED FRM SPOUSE	183	USMC UNREMARRIED FRM SPOUSE
USN ACADEMY CADET	184	USN ACADEMY CADET
USN ACTIVE DUTY	185	USN ACTIVE DUTY
USN AD RECRUIT	186	USN AD RECRUIT
USN AD RES-30 DAYS OR LESS, NOT LOD	187	USN AD RES-30 DAYS OR LESS, NOT LOD
USN AD RES	188	USN AD RES
USN APPLICANT/REGISTRANT	189	USN APPLICANT/REGISTRANT
USN FAM MBR AD	190	USN FAM MBR AD
USN FAM MBR DECEASED AD	191	USN FAM MBR DECEASED AD
USN FAM MBR DECEASED RETIRED	192	USN FAM MBR DECEASED RETIRED
USN FAM MBR FAD-TRANS ASSIST ACT	193	USN FAM MBR FAD-TRANS ASSIST ACT
USN FAM MBR RET	194	USN FAM MBR RET
USN FAM MBR UNREMAR FRM SPOUSE	195	USN FAM MBR UNREMAR FRM SPOUSE
USN FRM AD-TRANS ASSISTANCE ACT	196	USN FRM AD-TRANS ASSISTANCE ACT
USN RES INACT DUTY TRG - NOT LOD	197	USN RES INACT DUTY TRG - NOT LOD
USN RES INACT DUTY TRG	198	USN RES INACT DUTY TRG
USN RET LOS ENLISTED	199	USN RET LOS ENLISTED
USN RET LOS OFFICER	200	USN RET LOS OFFICER
USN RET PDRL ENLISTED	201	USN RET PDRL ENLISTED
USN RET PDRL OFFICER	202	USN RET PDRL OFFICER
USN RET TDRL ENLISTED	203	USN RET TDRL ENLISTED
USN RET TDRL OFFICER	204	USN RET TDRL OFFICER
USN ROTC	205	USN ROTC
USN UNREMARRIED FRM SPOUSE	206	USN UNREMARRIED FRM SPOUSE
USO PERS AND FAM MBR OUTSIDE US	207	USO PERS AND FAM MBR OUTSIDE US
USPHS ACTIVE DUTY	208	USPHS ACTIVE DUTY
USPHS AD RES	209	USPHS AD RES
USPHS APPLICANT/REGISTRANT	210	USPHS APPLICANT/REGISTRANT
USPHS FAM MBR AD	211	USPHS FAM MBR AD
USPHS FAM MBR DECEASED RETIRED	212	USPHS FAM MBR DECEASED RETIRED
USPHS FAM MBR RET	213	USPHS FAM MBR RET
USPHS RET LOS	214	USPHS RET LOS
USPHS RET TDRL	215	USPHS RET TDRL
VETERANS ADMIN BENEFICIARY	216	VETERANS ADMIN BENEFICIARY
VOL DONOR ORGAN/BLOOD NO CHARGE	217	VOL DONOR ORGAN/BLOOD NO CHARGE
VOL SUBJECT RESEARCH PROJECT	218	VOL SUBJECT RESEARCH PROJECT
WC-CIV, DOD EMPL	219	WC-CIV, DOD EMPL

WC-CIV, FED EMPL	220	WC-CIV, FED EMPL
WC-DOD BENE, DOD EMPL	221	WC-DOD BENE, DOD EMPL
WC-DOD BENE, FED EMPL	222	WC-DOD BENE, FED EMPL
WC-DOD BENE, NON-FED EMPL	223	WC-DOD BENE, NON-FED EMPL
WELFARE WRKR/VOL/STUDENT NURSE	224	WELFARE WRKR/VOL/STUDENT NURSE
YTH GRP EMRG-MIL SPON-DOD INSTL	225	YTH GRP EMRG-MIL SPON-DOD INSTL

Appendix F

M2 Business Objects Query

M2 Business Objects Query



Appendix G

SPSS Output

Descriptive Statistics

	Mean	Std. Deviation	N
Qust_compsat Q7 Overall Sat w/Prvdr	4.54	.986	104013
Age_17andBelow	.16	.362	104013
Age_18to24	.13	.337	104013
Age_25to34	.17	.376	104013
Age_35to44	.19	.393	104013
Age_65orMore	.09	.286	104013
Cat_OTH	.27	.442	104013
Cat_RET	.13	.340	104013
Cat_FM	.32	.467	104013
Hosp	.32	.468	104013
MedCen	.16	.370	104013
NP	.23	.421	104013
PA	.29	.454	104013
Patient_Gender	.52	.500	104013
Qust_MPCM	.29	.452	104013
Rnk_O1	.02	.134	104013
Rnk_O2	.03	.163	104013
Rnk_O3	.17	.374	104013
Rnk_O4	.14	.344	104013
Rnk_O5	.04	.190	104013
Rnk_O6	.01	.103	104013
Rnk_UKN	.00	.038	104013

Correlations

		Qual_composit Of Overall Sat wProvd	Age_17andBelow	Age_18to24	Age_25to34	Age_35to44	Age_45andMore	Cat_OTH	Cat_REF	Cat_JM	Hosp	MedCan	NP	PA	Patient_Gender	Qual_MPCM	Rnk_01	Rnk_02	Rnk_03	Rnk_04	Rnk_05	Rnk_08	Rnk_UKN
Pearson Correlation	Qual_composit Of Overall Sat wProvd	1.000	.008	-.035	-.073	-.019	.032	.054	.073	-.025	.020	.025	.051	-.058	.009	.070	-.012	-.007	.009	.002	.015	.019	-.002
	Age_17andBelow	.008	1.000	-.188	-.194	-.203	-.195	-.129	-.188	.402	.009	-.024	.054	-.109	-.027	-.009	-.049	-.034	-.040	-.034	-.011	-.018	-.010
	Age_18to24	-.035	-.188	1.000	-.175	-.138	-.122	-.049	-.151	-.038	-.058	-.031	-.038	.128	.010	-.104	.057	.007	.025	-.019	-.002	-.025	-.008
	Age_25to34	-.073	-.194	-.175	1.000	-.220	-.142	-.130	-.175	.089	-.021	-.073	-.022	.030	.030	-.035	.037	.009	.042	.021	-.009	-.017	-.003
	Age_35to44	-.019	-.203	-.138	-.220	1.000	-.158	-.030	-.118	-.032	-.014	-.031	-.034	.051	-.035	-.048	.029	.038	.030	.022	-.002	-.001	.001
	Age_45andMore	.032	-.195	-.122	-.142	-.158	1.000	.191	.297	-.210	-.030	.135	.030	-.030	.015	.129	-.037	-.048	-.008	-.013	.011	.031	-.008
	Cat_OTH	.054	-.129	-.049	-.130	-.030	.191	1.000	-.238	-.418	-.032	.114	.029	-.040	.282	.047	-.047	-.021	-.029	-.012	-.009	.004	.019
	Cat_REF	.073	-.188	-.151	-.175	-.118	.297	-.238	1.000	-.271	.024	.119	.032	-.074	-.358	.141	-.045	-.056	-.018	-.008	.007	.022	.008
	Cat_JM	-.025	.402	-.038	.089	-.032	-.210	-.418	-.271	1.000	.125	-.058	.107	-.148	.380	.080	-.074	-.073	-.030	-.027	-.002	-.018	-.011
	Hosp	.020	.031	-.058	-.021	-.014	-.030	-.032	.024	.125	1.000	-.308	.048	-.029	.052	-.014	-.034	.034	.039	-.007	.027	.019	.019
	MedCan	.025	-.024	-.031	-.073	-.031	.135	.114	.119	-.058	-.308	1.000	.039	-.038	.089	.022	-.058	-.051	-.043	.001	.018	.000	-.017
	NP	.051	.054	-.038	-.022	-.034	.030	.029	.032	.107	.048	.039	1.000	-.300	.190	-.034	-.075	-.037	-.038	.184	.080	-.020	-.021
	PA	-.058	-.109	.128	.030	.051	-.030	-.040	-.374	-.148	-.029	-.038	-.300	1.000	-.146	-.135	.039	.344	-.030	-.158	-.127	-.085	-.034
	Patient_Gender	.009	-.027	.018	.038	-.035	.015	.282	-.358	.380	.052	.085	.190	-.145	1.000	.009	-.083	-.032	-.025	-.004	.009	-.014	.009
	Qual_MPCM	.070	-.009	-.104	-.035	-.048	.129	.047	.141	.080	-.014	.022	-.034	-.135	.009	1.000	-.051	-.037	-.011	-.002	.003	.008	.000
	Rnk_01	-.012	-.049	.057	.037	.029	-.037	-.047	-.045	-.074	-.034	-.056	-.075	.039	-.083	-.051	1.000	-.029	-.082	-.054	-.027	-.014	-.005
	Rnk_02	-.007	-.034	.007	.009	.038	-.048	-.021	-.056	-.073	.034	-.051	-.037	.344	-.032	-.037	-.029	1.000	-.075	-.087	-.039	-.017	-.008
	Rnk_03	.009	-.040	.025	.042	.030	-.008	-.029	-.018	-.030	.039	-.043	-.038	-.030	-.025	-.011	-.082	-.075	1.000	-.179	-.039	-.047	-.017
	Rnk_04	.002	-.034	-.019	.021	.022	-.012	-.012	-.008	-.027	-.007	.001	.184	-.158	-.004	-.002	-.054	-.087	-.179	1.000	-.079	-.041	-.015
	Rnk_05	.015	-.011	-.002	-.009	-.002	.011	-.009	.007	-.002	.027	.013	.080	-.127	.009	.003	-.027	-.030	-.039	-.079	1.000	-.021	-.007
	Rnk_08	.019	-.018	-.025	-.017	-.001	.031	.004	.022	-.018	.019	.000	-.020	-.085	-.014	.008	-.014	-.017	-.047	-.041	-.021	1.000	-.004
	Rnk_UKN	-.002	-.010	-.008	-.003	.001	-.008	.019	.008	-.011	.019	-.017	-.021	-.034	.009	.000	-.005	-.008	-.017	-.015	-.007	-.004	1.000
Sig. (1-tailed)	Qual_composit Of Overall Sat wProvd	.	.013	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.190	.000	.000	.018	.145	.000	.000	.000	.288
	Age_17andBelow	.013	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.145	.000	.000	.000	.000	.000	.000	.001
	Age_18to24	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.230	.000	.008
	Age_25to34	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.159	.000	.007
	Age_35to44	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.309	.348	.373
	Age_45andMore	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.184
	Cat_OTH	.000	.000	.000	.000	.000	.000	.	.000	.000	.258	.000	.000	.000	.000	.000	.000	.000	.000	.000	.145	.004	.000
	Cat_REF	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.220	.000	.000	.000	.000	.000	.000	.028	.019	.000	.025
	Cat_JM	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.388	.000	.000
	Hosp	.000	.000	.000	.000	.000	.000	.258	.000	.000	.	.000	.000	.000	.000	.000	.000	.008	.000	.013	.000	.000	.000
	MedCan	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.374	.000	.487	.000
	NP	.000	.000	.000	.000	.000	.000	.000	.220	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	PA	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000
	Patient_Gender	.190	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.078	.009	.000	.002
	Qual_MPCM	.000	.145	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.221	.007	.004	.000
	Rnk_01	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.043
	Rnk_02	.018	.000	.000	.000	.000	.000	.000	.000	.000	.008	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.020
	Rnk_03	.145	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.000	.000	.000	.000	.	.000	.000	.000	.000
	Rnk_04	.000	.000	.000	.000	.000	.000	.000	.028	.000	.013	.374	.000	.000	.078	.221	.000	.000	.000	.	.000	.000	.000
	Rnk_05	.000	.000	.230	.159	.309	.000	.145	.019	.388	.000	.000	.000	.000	.009	.007	.000	.000	.000	.000	.	.000	.008
	Rnk_08	.000	.000	.000	.000	.348	.000	.004	.000	.000	.000	.487	.000	.000	.000	.024	.000	.000	.000	.000	.000	.	.102
	Rnk_UKN	.288	.001	.008	.007	.373	.184	.000	.025	.000	.000	.000	.000	.000	.002	.000	.043	.020	.000	.000	.008	.102	.
N	Qual_composit Of Overall Sat wProvd	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Age_17andBelow	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Age_18to24	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Age_25to34	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Age_35to44	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Age_45andMore	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Cat_OTH	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Cat_REF	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Cat_JM	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Hosp	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	MedCan	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	NP	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	PA	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Patient_Gender	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Qual_MPCM	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_01	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_02	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_03	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_04	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_05	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_08	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019
	Rnk_UKN	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019	104019

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Rnk_UKN, Age_35to44, Rnk_O6, Rnk_O5, Cat_FM, Qust_MPCM, MedCen, Rnk_O4, Rnk_O1, Rnk_O2, Age_18to24, NP, Rnk_O3, Hosp, Age_65orMore, Patient_Gender, Age_25to34, PA, Cat_RET, Age_17andBelow, Cat_OTH[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: Qust_compsat Q7 Overall Sat w/Prvdr

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.171[a]	.029	.029	.972	.029	149.814	21	103991	.000

a. Predictors: (Constant), Rnk_UKN, Age_35to44, Rnk_O6, Rnk_O5, Cat_FM, Qust_MPCM, MedCen, Rnk_O4, Rnk_O1, Rnk_O2, Age_18to24, NP, Rnk_O3, Hosp, Age_65orMore, Patient_Gender, Age_25to34, PA, Cat_RET, Age_17andBelow, Cat_OTH

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2971.944	21	141.521	149.814	.000[a]
	Residual	98234.422	103991	.945		
	Total	101206.37	104012			

a. Predictors: (Constant), Rnk_UKN, Age_35to44, Rnk_O6, Rnk_O5, Cat_FM, Qust_MPCM, MedCen, Rnk_O4, Rnk_O1, Rnk_O2, Age_18to24, NP, Rnk_O3, Hosp, Age_65orMore, Patient_Gender, Age_25to34, PA, Cat_RET, Age_17andBelow, Cat_OTH

b. Dependent Variable: Qust_compsat Q7 Overall Sat w/Prvdr

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	4.496	.012		387.921	.000			
	Age_17andBelow	-.077	.012	-.028	-6.208	.000	.006	-.019	-.019
	Age_18to24	-.269	.012	-.092	-23.282	.000	-.085	-.072	-.071
	Age_25to34	-.218	.011	-.083	-19.609	.000	-.073	-.061	-.060
	Age_35to44	-.097	.010	-.039	-9.463	.000	-.013	-.029	-.029
	Age_65orMore	.139	.012	.040	11.630	.000	.092	.036	.036
	Cat_OTH	.094	.010	.042	9.215	.000	.054	.029	.028
	Cat_RET	.112	.013	.039	8.657	.000	.078	.027	.026
	Cat_FM	.057	.010	.027	5.479	.000	-.025	.017	.017
	Hosp	.019	.007	.009	2.684	.007	.020	.008	.008
	MedCen	-.002	.009	-.001	-.237	.813	.029	-.001	-.001
	NP	.093	.008	.040	11.891	.000	.051	.037	.036
	PA	-.014	.008	-.006	-1.743	.081	-.058	-.005	-.005
	Patient_Gender	-.015	.008	-.008	-1.926	.054	.003	-.006	-.006
	Qust_MPCM	.093	.007	.043	13.230	.000	.070	.041	.040
	Rnk_O1	.122	.023	.017	5.239	.000	-.012	.016	.016
	Rnk_O2	.135	.019	.022	6.941	.000	-.007	.022	.021
	Rnk_O3	.067	.008	.026	7.958	.000	.003	.025	.024
	Rnk_O4	.099	.009	.035	10.626	.000	.032	.033	.032
	Rnk_O5	.083	.016	.016	5.136	.000	.015	.016	.016
	Rnk_O6	.160	.030	.017	5.421	.000	.019	.017	.017
	Rnk_UKN	-.074	.080	-.003	-.922	.357	-.002	-.003	-.003

a. Dependent Variable: Qust_compsat Q7 Overall Sat w/Prvdr

REPORT DOCUMENTATION PAGE	Form Approved OMB No. 0704-0188

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From - To)
24-07-2006	Final Report	July 2005 to July 2006

4. TITLE AND SUBTITLE
Graduate Management Project
Affects of Provider Type on Patient Satisfaction and Productivity

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Timothy T. Foster, LCDR, NC

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
TRICARE Regional Office - South

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
US Army Medical Department Center and School
BLDG 2841 MCCS-HFB (Army-Baylor Program in Healthcare Administration)
3151 Scott Road, Suite 1411
Fort Sam Houston, TX 78234-6135

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)
35-06

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The purpose of this one year retrospective quantitative study is to determine if the type of provider (physician, nurse practitioner, and physician assistant) influences patient satisfaction and productivity. 104,013 Army beneficiaries who visited their Primary Care Managers (PCM) from January 2004 to December 2004, were surveyed and their results were used as the sample for this study. Provider productivity and cost efficiency within CONUS Military Treatment Facilities (MTFs) was evaluated using the period of January 2004 to December 2004, with a sample size of 20,421. The alpha level was set at .05 and multiple linear regression and analysis of variance were used to determine the predictive value of the model. The results show that there is a statistically significant positive relationship between nurse practitioners and patient satisfaction. The analysis of variance showed that physician assistants have a lower cost per visit ratio, and there is no difference between provider types and relative value units.

15. SUBJECT TERMS
Provider Type, Patient Satisfaction, Productivity

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Education Technician
U	U	U	U U	58	19b. TELEPHONE NUMBER (Include area code) (210) 221-6443