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14. ABSTRACT In the spring of 2004, The DeWitt Health Care Network adopted a new governance structure and identified five strategic priorities. Following this change, the organization did not have a method to gauge the performance of the new structure and assess progress toward the strategic priorities. The purpose of this study was to develop a method to objectively monitor the performance of the new governance structure and track strategic organizational improvement. The study identified twelve objective measures and tracked the performance of eleven measures over five months. Three criteria were used to select the measures; executive level initiative, leverage for improvement, and strategic support. The study demonstrated performance improvements in six of eleven measures. Ten measures were found to hold value in monitoring the organization's governance structure and strategic performance. The study suggests that continued monitoring of the measures would enable the implementation and maturity of executive initiatives thereby providing a more meaningful view of strategic performance.					
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Running Head: Selection of Organizational Performance Measures

Selection of Organizational Performance Measures and their
Ability to Promote the Strategic Priorities of the Dewitt Health
Care Network

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Abstract

In the spring of 2004, The DeWitt Health Care Network reconfigured its governance structure and identified five strategic priorities. Following this change, the organization did not have a method to gauge the performance of the new structure and assess progress toward the strategic priorities. The purpose of this study was to develop a method to objectively monitor the performance of the new governance structure and track strategic organizational improvement. The study identified twelve objective measures and then tracked the performance of eleven measures over a five month period. Three criteria were used to select the measures; executive level initiative, leverage for improvement, and strategic support. The study demonstrated performance improvements in six of eleven measures. At the conclusion of the study, two measures no longer met the criteria used in the selection process. The remaining ten measures were found to hold value in monitoring the organization's governance structure and strategic performance improvement. The study suggests that continued monitoring of the objective measures would support the implementation and maturation of executive initiatives thereby providing a more meaningful view of organizational strategic performance.

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Selection of Organizational Performance Measures and their
Ability to Promote the Strategic Priorities of the Dewitt Health
Care Network

Introduction

Measuring the performance of healthcare organizations is difficult. Cost, quality of care, efficiency, effectiveness, return on investment and patient satisfaction are just a few aspects that health care organizations attempt to measure. The increased level of scrutiny on measures of organizational performance is becoming more pervasive within the U.S. healthcare industry. The rising costs associated with healthcare, patient safety and increasing competition have provoked many healthcare organizations to intensify their focus on performance analysis. As a result, government and private entities have spent considerable time and money to develop standardized measurement sets for healthcare organizations. As information technology improves, accrediting organizations, businesses, and the government are able to analyze more data and assess the quality and performance of healthcare organizations. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), the American Hospital Association (AHA), and the Agency for Healthcare Research and Quality (AHRQ) have

each developed measurement sets to help evaluate the quality of healthcare.

Although standardized or common sets of measurement have the potential to provide valuable performance information, they have several drawbacks when used to gauge the performance of individual healthcare organizations. Despite the vast amount of information, the many methods of measurement and analysis often create labor intensive mandates. Meanwhile, healthcare organizations struggle to wade through mountains of data and interpret what these measures really mean to the individual organization. Transforming data into useful information can be an expensive undertaking for healthcare organizations. As the number of measurements and the amount of data increase, organizations continue to wrestle with how they should use the information to accomplish their mission.

As the single largest purchaser of healthcare in the U.S., the federal government is intensifying its efforts to measure the performance of federally funded healthcare facilities. However, healthcare organizations within the government are also unique in nature. Sources of capital, budgeting, services, patient demographics, purpose, and strategic goals vary from organization to organization. Each Department of Defense (DoD) healthcare organization has a unique mission, set of services and beneficiaries. As part of the Army Medical Department, the

Dewitt Health Care Network (DHCN) illustrates an organization that is unique in purpose, composition, and structure.

In an effort to streamline performance measure analysis into useful information, the Army Medical Department has adopted the Balanced Scorecard System as a central component of its strategic management system. The adoption of this method conveys the value and importance the military places on the strategic alignment of measurable objectives with the overall mission of its organizations. The concepts underlying the Balanced Scorecard System have led the DHCN and other facilities to research and determine those objective measures that hold strategic importance to the organization. Although the identification and alignment of objective measures varies with the mission, vision, and strategic goals of an organization, they are not intended to serve as the sole basis for determining organizational performance. Instead, they serve as a tool to track incremental progress toward achieving strategic goals. Common measures that monitor routine processes should not be ignored in lieu of strategically aligned measures. They should be organized in a manner that conveys meaningful information about the performance of the process. Both private and government organizations rely on objective measures to pursue their own unique strategic priorities. This process holds the

potential for executives and managers to more effectively apply the most basic principles of strategic management.

Conditions that prompted the study

The Dewitt Healthcare Network is the compilation of four Family Health Clinics anchored by the 43 bed Dewitt Army Community Hospital (ACH) on Ft. Belvoir, VA. The DHCN serves approximately 90,500 TRICARE Prime and Plus patients within the National Capital Region. The DHCN's over 90,000 Prime and Plus enrolled beneficiaries make it the largest Department of Defense facility in the National Capital Region and place it fourth among all U.S. Army facilities. Only Fort Hood, Fort Bragg, and Fort Lewis facilities have a larger TRICARE Prime enrolled population.

DHCN provides primary care through the Dewitt Family Health Clinic on Ft. Belvoir. Additionally, the DHCN oversees two contract family health clinics located respectively in Woodbridge and Fairfax and provides over site of Rader Family Health Clinic on Ft. Myer. The four DHCN Family Health Clinics provide the bulk of primary healthcare for military beneficiaries in the National Capital Region. The network also offers a variety of specialty services including orthopedics, behavioral health, pharmacy, obstetrics/gynecology, cardiology, and operates an Emergency Department at Dewitt ACH. Additionally, the DHCN serves a crucial role as a primary care

Graduate Medical Education site, training approximately one-seventh of the U.S. Army's family practice physicians.

It is important to understand the history and purpose of the DHCN new governance model in order to provide context for the subject of this study. In September of 2003, DHCN set out to improve the efficiency and information flow of its committee structure. This effort included redefining the network's mission, vision, goals, strategic priorities, and included a complete overhaul of the network's 30 existing committees. The re-tooling of the committee governance structure resulted in the consolidation of some committees into Functional Management Teams (FMT) (Appendix A). The FMTs provided the primary foundation for committee governance and the development of new proposals within the network. The FMTs were forged to include a cross section of stakeholders and experts in each functional area and encourage discourse across division and departmental boundaries. The FMTs are designed to work much like congressional committees, in which the nuts and bolts of new legislation are worked out prior to sending the bill forward for a vote. In the case of FMTs, the subject matter experts and stakeholders work through the details of new proposals or procedures and settle on a recommended course of action. Through this realignment and consolidation, the network removed duplicity of effort in some committee areas and clarified the

process by which FMTs raised issues to a Clinical Administrative Steering Committee (CASC).

The CASC was created to discuss and evaluate proposals raised during FMT meetings. This new committee was designed to be multi-functional, consolidating the functions of four committees. The functions of the former Performance Improvement Committee, Executive Committee for Medical Services, Quality Management Board and the Administrative Staff Committee were absorbed by the CASC. The CASC meets on a bi-monthly basis and is chaired by the Deputy Commander for Clinical Services, Nursing and Administration on a rotational basis. Each Deputy Commander chairs the committee every third meeting. The CASC considers FMT proposals and then either returns the proposal to the owning FMT for further action or refers the proposal to the Executive Committee for a decision. The Executive Committee is chaired by the Hospital Commander and is attended by only the DCCS, DCN, DCA and CSM. The Executive Committee discusses the proposals and makes recommendations to the commander for approval or disapproval.

Each proposal brought forward by the FMTs is aligned with one of five strategic priorities identified by the command. By forcing FMTs to consider each proposal in the context of improving one of the network's five priorities, the network is able to more efficiently direct the focus of each FMT. To

maintain focus on these strategic priorities, the CASC meeting agenda is conducted using the five priorities to steer the discussion. The reorganization of committees into the FMT structure and the deliberate focus on the network's strategic priorities are designed to allow the entire staff to work in unison toward the overall mission of the organization. In short, the new governance structure aligns the FMTs to work in one concerted effort in the strategic direction of the organization. The new structure has helped eliminate multiple committees from working the same issue and implemented a more formal process to submit proposals to the command leadership.

Although the new FMT/CASC governance structure has streamlined the process by which new proposals are considered within the network, opportunities still exist to improve the process. Some CASC meetings appear to lose the focus they were designed to achieve. New issues occasionally become bogged down in discussions that are clearly more suited for the individual FMT format. The CASC is a large group representative of all FMTs within the network. Narrow issues could be more efficiently sorted within FMT meetings while preserving CASC meetings for the examination of more focused or complete proposals.

Following the implementation of the new governance structure in January 2004, the DHCN participated in the re-

accreditation visit by the Joint Commission for the Accreditation of Healthcare Organizations (JACHO) in May 2004. After the JACHO visit, the DCHN underwent a change in leadership that included a new Hospital Commander, Deputy Commander for Nursing, and Command Sergeant Major as well as new leadership at the higher headquarters of the North Atlantic Regional Medical Command (NARMC). When the leadership of the DHCN set out to re-align the governance model of the network, they also sought to identify a method to measure progress toward the strategic priorities of the network. Following the transition in leadership, the hospital began the process of trying to identify measurements that would indicate how well the organization was performing under the new governance structure. Although the new structure eliminated some redundant committees and formally identified a processes to staff new initiatives, the facility had no way to determine whether this new structure helped achieve the organization's strategic priorities. In August of 2004, the DHCN found itself with several new senior leaders, a new governance structure and a relatively new mission, vision, list of goals and set of strategic priorities. With these new organizational factors in place, the DHCN sought a set of measurements that would evaluate progression toward its strategic priorities and organizational performance.

Statement of the question

The DHCN leadership has identified five strategic priorities that will guide the organization toward achieving its mission. In order to evaluate the performance of the organization, DHCN must establish a method to measure its progress toward achieving its strategic priorities. The list of healthcare related performance measures created by both private and government organizations is long and diverse. The question for the DHCN is to determine which measures the network should target to drive organizational improvement within its Northern Virginia network. Identification of organizational performance measures that align with the five unique DHCN strategic priorities will allow the network to establish meaningful benchmarks, monitor organizational progress, and improve performance in each of the network's strategic priorities. The key to successfully supporting this hypothesis will be to identify a collection of measurements that accurately represent the DHCN's unique strategic priorities and organizational structure. Additionally, by elevating organizational attention and reporting frequency of strategically important performance measures, the DHCN will improve organizational performance as defined by its five strategic priorities.

Literature Review

The concept of using objectives, measurements and goals to manage people and organizations is not a new phenomenon. In

1954, management pioneer Peter Drucker introduced the system known as managing by objectives (Beatty, 1998). The basic concept of managing by objectives is one of the dominant concepts in management today (Beatty, 1998). Using his experience gained in a consulting practice, Drucker promoted the idea that the function of managers was not merely to supervise subordinates but to help subordinates set objectives and goals and give them the freedom to achieve them. Objective measures served as yardsticks for the individual manager or executive to appraise. Drucker's idea of managing through the use of objective measures has become a dominant concept in management today (Beatty, 1998).

A colleague of Drucker's, W. Edwards Deming, also helped justify the use of measure as a useful tool in management. Deming, considered by many as the father of the "quality revolution" in American business, pioneered a process focused approach to measurement rather than focusing exclusively on outcomes (Beatty, 1998). Deming viewed measurement as a process and sought to determine the causes of variation in measurement by examining the process (Deming, 1994).

The significance of these two men and their influence on objective measurement in business cannot be overstated. The concepts developed by these two pioneers have been widely implemented, studied and expanded. Many business success

stories such as the post World War II economic revival of Japan have been attributed to the application of the general concepts of Drucker and Deming. The literature overwhelmingly supports that objective measurement of business processes is an effective management tool to drive organizational improvement. The concept of measuring objectives to indicate the performance of an organization is a fundamental component of this study.

Objective measures can convey a great deal of information to the leadership of an organization. Determining those objective measures that are best for the organization and support its strategic goals is a task of crucial importance. Kaplan and Norton of the Harvard Business School noted one shortcoming of management by objective. They contended that in a management by objective system, the objectives are developed within individual business units and in essence simply ask individuals to do their existing jobs better (Kaplan & Norton, 2001). The objectives were not adequately tied to the overall strategic direction of the organization (Kaplan & Norton, 2001). Kaplan and Norton offered their balanced scorecard management system to remedy this oversight. In the balanced scorecard system, objective measurements are developed to fit into the broader strategy of the organization. They emphasize that their approach produces objectives that are cross functional, longer

term, and strategically support the organization (Kaplan & Norton, 2001).

The Balanced Scorecard approach supports the rationale used in the re-alignment of DHCN committees into FMTs. The FMTs, composed of a cross section of the network's functional areas, are designed to develop objectives that are meaningful to the organization as a whole as opposed to a specific department or division. The DHCN FMTs provide the requisite organizational structure to support the development of objectives that are aligned with the central strategic priorities of the organization.

The Balanced Scorecard System has been implemented in many organizations, both private and public. The U.S. Army Medical Department valued the Balanced Scorecard System enough to adopt it as the central component of its strategic management system in 2001 (Swofford, 2003). The adoption of the Balanced Score Card system by the Army Medical Department directly supports the practice of aligning organizational performance measures with the strategic goals and direction of the organization.

The academic literature on the subject overwhelmingly shows support for aligning performance measures with the strategic direction of the organization. Despite this support, only 7% of U.S. line employees and 21% of middle managers in the U.S. linked their personal goals to the strategic direction of the

organization (Kaplan & Norton, 2001). Several factors may help explain the missing link between performance measures and strategy. Peter Senge, author of *The Fifth Discipline* contends that the problem manager's face today is the problem of too much information (Senge, 1990). Managers of organizations need to know what information is important and on which variables they should focus their effort. A broad look at the multitude of quality and performance measures within the healthcare industry easily show how a manager could become overwhelmed by too much information. For example, the final measure set of the National Healthcare Quality Report prepared by the Agency for Healthcare Research and Quality (AHRQ) lists 38 individual measures for patient safety alone (AHRQ, 2004). Healthcare managers and executives are vulnerable to suffer inefficiencies arising from complex and overabundant information. Senge argues that complexity or multiple measures should be coherently organized in a way that reveal problems in the system and illustrate those areas that provide high leverage for change. His concept directly supports the efforts of the DHCN to identify specific objective measures that provide high leverage for change and support the strategic direction of the organization.

Aligning performance measures with organizational strategy allows executives to monitor the organization's progress toward its strategic goals and produces performance improvement

benefits. Furthermore, the act of monitoring can provide a stimulus to promote improvement through employee motivation (Ginter, Swayne & Duncan, 2002). Monitoring performance through the use of strategically aligned measures forces managers to consider the strategic impact of their decisions. Additionally, the strategic direction of the organization benefits from lower level decisions that directly support it. The key to realizing the benefits of strategic alignment of performance measures is to select the right measures.

Peter Drucker proposes five measures that can serve to paint an accurate picture of performance for most organizations. The measures are: market standing, innovative performance, productivity, liquidity and cash flow, and profitability (Ginter, Swayne & Duncan, 2002). Originally designed for application to for-profit companies, Drucker's measures lack the specificity and qualitative meaning required to measure performance in modern healthcare organizations. Strategic priorities tend to be qualitative in nature and often times do not lend themselves to strict quantitative analysis through ratios or margins. For example, measuring quality, access, and emergency preparedness for a non profit healthcare network requires careful analysis to ensure strategic alignment. Aligning a quantitative objective measure with a qualitative

strategic goal requires creativity and a thorough understanding of the organization's strategic priorities.

Standardized sets of measures are becoming common in the healthcare industry. JCAHO, NCQA, Centers for Medicare and Medicaid, The Leapfrog Group, The National Quality Forum and the American Hospital Association all have proposed measure sets to determine quality. They provide valuable information relating to population health, efficiency and effectiveness of healthcare. The key question is whether standardized measures should be used to gauge performance of individual healthcare organizations. The modern literature on the subject promotes the development of a more customized performance measurement tool while simultaneously tracking common measures of quality and performance.

Debra Simmons, a senior clinical quality improvement analyst at the Institute for Healthcare Excellence at the University of Texas, explains that healthcare is locally defined and locally delivered (Healthcare Benchmarks and Quality Improvement, 2003). While Patrice Spath, a healthcare consultant with Brown-Spath & Associates agrees with Simmons analysis, she contends each hospital system should choose measurements they need based on the priorities of their organization. She advocates that the measurements should flow from the organization's mission, vision and strategic

objectives. Individual organizations should determine what makes sense for their given patient population and strategic objectives (Healthcare Benchmarks and Quality Improvement, 2003).

One advantage for using a standardized set of performance measures is that it allows an organization to evaluate performance for measures common across the varying types of healthcare organizations. However, to develop meaningful measures of performance linked to strategic objectives, organizations must determine which measures are most appropriate. The cost and resource requirements for gathering the information should also be considered.

A method to aid in the selection of the best objective measure is through a process of "gap analysis" advocated by Jim Collins in his book *Good to Great: Why Some Companies make the Leap...and Other Don't* (Collins, 2001). Collins proposes organizations identify those areas that have the biggest variance from the organization's current level of performance compared with a benchmark. A gap analysis helps an organization make greater strides toward achieving strategic objectives by targeting those areas that hold the greatest potential for improvement. Improvement efforts are focused on a vital few measurements accompanied by short-term goals to affect the greatest amount of change for the effort (Pieper, 2004).

Identifying vital measurements or lead strategic indicators using gap analysis increases the impact of strategic alignment. First, the analysis focuses the organization on its strategic objectives and then maximizes the potential for improvement by selecting the objectives with the largest variance. Collins contends that prompt action following a gap analysis can make the difference between good and great organizational performance (Pieper, 2004).

In summarizing the applicable literature on the subject, a few key points rise to the surface. First, objective measures are effective tools to track incremental changes in performance within healthcare organizations. Monitoring objective measures can have a significant impact on the performance of any area. Second, identifying measures that cross departmental and division boundaries help unify the organization toward a common purpose and promote systems thinking. Thirdly, aligning objective measures with the strategic priorities of the organization provides a valuable tool for managers to monitor and evaluate how the organization is progressing toward its strategic objectives. Fourthly, selecting measures that have the greatest difference between current and desired levels of performance will aid organizations in maximizing improvement. Lastly, standardized or common measures of performance are valuable for comparative analysis but an organization should

monitor those measures that best align with its unique mission, vision, and goals.

Purpose

The purpose of this study is to identify objective performance measures that directly align with each of the five strategic priorities set out by the DHCN command. Additionally, the study seeks to identify a method of monitoring the ability of the DHCN's governance structure to promote its strategic priorities. The strategic priorities of the Dewitt Healthcare Network are listed in Table 1.

Table 1

DeWitt Health Care Network Strategic Priorities

Strategic Priority

Provide quality and timely garrison health care services
Maintain readiness requirements
Match resource planning and execution to mission
Develop and leverage IM/IT opportunities throughout the DHCN
Ensure the quality development of the new facility

The dependent variable for this study is strategic organizational performance. The independent variables are twelve objective measures listed and operationally defined in Table 2. The alternate hypothesis for this study is that there is a correlation between alignment of objective measures and strategic performance improvement within the DHCN. The goal for the study is to determine if selecting and monitoring strategically linked performance measures will aid performance

improvement and allow the organization to monitor progress in furthering its strategic priorities.

Table 2

Operational definitions of objective measures

Objective Measure Name	Operational Definition
Overall DHCN patient satisfaction	Overall percentage satisfaction rating for the 4 weeks period reported in the Provider Level Patient Satisfaction Survey
Primary Care provider productivity	Total DHCN Primary Care RVU's per primary care provider FTE's worked per month
Open primary care appointments	Percentage of DHCN open primary care appointments per month
Overall satisfaction with phone service	DHCN percentage of overall satisfaction with phone service reported by the Provider Level Patient Satisfaction Survey (top 2 Box) four week period
DHCN Dermatology Referrals	Total number of DHCN Prime patient dermatology referrals to the civilian network each month
DHCN PROFIS Provider Training	Percentage of PROFIS DHCN providers identified in CCQAS meeting requirements for Sustained Medical Readiness Training
Individual Readiness	Percentage of non-student DHCN military personnel available for deployment IAW AR 220-1, Table D-1 as reported by MODS
Total Relative Value Units (RVU)	Total DHCN RVU's as a percentage of the Command Management System goal
Third Party Collections	Total DHCN Third Party Collections and Medical Affirmative Claims per month in dollars
Primary Care patients per hour	Total Primary Care Patients seen per primary care provider hour
Primary Care ICDB usage	Total percentage of DHCN primary care visits that used the ICDB for the preceding 4 weeks
New Hospital Contract Modifications	Total number of the new hospital construction contract modifications for the month

Methods and Procedures

The development of the research design focused on selecting objective measures that align with the organization's strategic objectives and used data which the organization was currently gathering. The study used observation and interviewing techniques to initially identify the breadth of data available and existing measurements being collected by the organization. The objective measures in this study used only data and information the organization was generating in October of 2004. No new data collection requirements were placed on the organization; however some measures were derived from a combination of data sources creating a new objective measure. The study did not use any patient level data or information which could be used to identify an individual.

The study identified twelve separate strategic objective measures. Measures were selected after evaluating over 250 existing measures, data, and information generated from the DHCN and other sources. Each measure was aligned with one of the five strategic priorities of the organization as listed in table 3.

Table 3

Objective Measure Alignment with DHCN Strategic Priorities**Provide Quality and Timely Garrison Health Care Services**

Overall DHCN patient satisfaction
 Primary Care provider productivity
 Open Primary Care appointments
 Overall satisfaction with phone service
 DHCN Dermatology Referrals

Maintain Readiness Requirements

DHCN PROFIS Provider Training
 Individual Readiness

Match Resource Planning and Execution to Mission

Total Relative Value Units (RVU)
 Third Party Collections
 Primary Care patients per hour

Develop and Leverage IM/IT Opportunities throughout the DHCN

Primary Care ICDB usage

Ensure the Quality Development of the New Facility

New Hospital Contract Modifications

The data used for each measurement was collected during the period from August 2004 through March 2005. Each measure was selected as a representative indicator of performance for each strategic priority. The measures are numbered 1 through 12 for reference purposes.

Objective Measure Selection

The objective measures were selected using three criteria; executive level initiative, leverage for improvement, and strategic support. The executive level initiative element identified measures in which the command was either overseeing

an existing performance improvement initiative or had directed an analysis of current performance. This element was selected to directly tie the strategic objective measures with the administration of the new governance structure. This element is intended to improve the validity of the measures in monitoring the effectiveness of the governance model.

Leverage for improvement was used to maximize performance improvement, targeting those objective measures that hold the largest potential for improvement. Measures with the largest gap between current performance and desired levels of performance were selected. This element is intended to aid the DHCN in maximizing performance improvement by identifying areas or measures with the greatest potential for return.

The element of Strategic Support was used in measure selection to ensure each measure aligned with a specific strategic priority of the DHCN. The study subjectively assigned either yes or no when assessing each prospective measures alignment with one of the five DHCN strategic priorities. This element was essential to improve the content validity of the study and ensure that each selected measure provided a representative indication of strategic performance.

Five objective measures were selected to represent the first strategic priority; provide quality and timely garrison

health care services. Table 4 lists the objective measures, unit of measure and target.

Table 4

Strategic Priority: Provide quality and timely health care services

Number	Objective Measure Name	Unit	Standard
1	Overall DHCN patient satisfaction	Percentage	88.56%
2	Primary Care provider productivity	RVU's	329.22
3	Open primary care appointments	Percentage	5.70%
4	Overall satisfaction with phone service	Percentage	83.50%
5	DHCN Dermatology referrals	Referrals	28

Objective measure 1 is the percentage of respondents to the Army Medical Departments Provider Level Patient Satisfaction Survey (PLPSS) who rated their patient satisfaction in the top two boxes (of five) when considering satisfaction with their provider. The measure represents the mean percentage of provider patient satisfaction adjusted to account for the unequal number of responses from the four DHCN treatment locations. This measure includes responses from DeWitt Army Community Hospital, Fairfax Family Health Center, Woodbridge Family Health Center, and Rader Health Clinic. Appendix 1 shows the separate values for each location and calculation of the overall DHCN satisfaction value. The target for this measure of 88.56% was determined by the Army Medical Department.

This measure was selected for two primary reasons. First, overall satisfaction provides the command a broad view over how patients view the healthcare they receive within the DHCN.

Patients consider their overall satisfaction taking into account access, timeliness, customer service, and the quality of healthcare they receive. Second, overall satisfaction conforms to the strategic priority of the organization and captures one of the three focus measurements set forth by the Assistant Secretary of Defense for Health Affairs in his May 2003 Memo, Military Health System - Measures for Success. This measure will allow the command to monitor how well the new governance structure permeates through the organization and ultimately manifests in how the networks beneficiaries view their healthcare.

Objective Measure 2, Primary Care RVUs per Provider FTE worked per month, was selected to aid the command in assessing productivity of the provider, as well as how the organization is progressing at capturing and documenting productivity. This measure is determined by dividing the sum of primary care RVUs within the DHCN by the total number of primary care provider Full Time Equivalents (FTEs) worked for the month. The RVUs for this measure were gathered from the M2 Military Health System Data Mart. The FTE data was obtained from the DHCN Department of Primary Care monthly report. The target for this newly created measure is 329.22 set as a baseline to reflect current performance at the beginning of this study. RVUs serve as a unit of measure which external organizations and higher headquarters

use to assess the productivity of the DHCN. In more simple terms, the RVU helps determine how much credit the network receives for producing healthcare.

Future budget decisions and asset allocations will be directly influenced by an organization's reported productivity determined by RVUs production. The relevance for measuring RVU production efficiency is significant because it contributes to how future resources will be allocated to the DHCN. Primary care RVUs were singled out in this measure because of the potential for improvement and representative proportion of the DHCN total RVUs. The DHCN Department of Primary Care treats approximately 25,000 patients per month and is the single largest producer of RVUs, accounting for about 45% of total DHCN RVUs monthly. Considering the comparatively large volume of RVUs generated by the Department of Primary Care, improvements in provider coding, data quality, and procedure documentation hold the potential to significantly impact overall health care productivity. Additionally, the Department of Primary Care has undertaken several new initiatives aimed at improving access, documentation, and productivity.

Objective Measure 3, open primary care appointments, was selected as an indicative measure of primary care efficiency. The DHCN is a network focused on the provision of primary care. A small decrease in the percentage of open primary care has the

potential to make a large increase in productivity and organizational performance. This potential supports assigning this measure as an area with high leverage for improvement.

Open primary care appointments were determined by dividing the total of open primary care appointments by the total of templated appointments for the network. The data used in this measure was taken from the Department of Primary Care monthly reports. Decreasing the percentage of primary care appointments aligns well with the efficiency element that contributes to quality health care.

The Department of Primary Care and the DHCN are pursuing several initiatives which look at template utilization. Primary care recognizes that some appointments which are not closed out in the Composite Health Care System (CHCS) truly represent open appointments. CHCS is the source for the Department of Primary Care monthly report. The possibility exists that "walk in" patients are treated during these open appointments but never properly annotated in the CHCS. The Department of Primary Care is seeking to improve the documentation of these patients through staff education and filling open appointments with walk in patients. This initiative holds the potential to provide the DHCN with a more accurate representation of template utilization.

In October of 2004 the DHCN began operating a call center which assumed the Primary Care appointing function from a private contractor. Additionally, the network opened the number of appointments available for booking through the TRICARE Online website. These initiatives, coupled with the Department of Primary Care re-structuring will provide an excellent opportunity to monitor how well the DHCN governance structure manages performance improvement.

Objective Measure 4, Overall Satisfaction with Phone Service was selected primarily for its strong alignment with the strategic priorities of the organization. The Assistant Secretary of Defense for Health Affairs identified satisfaction with telephone access as "perhaps the leading indicator that affects overall perceptions of access" (Assistant Secretary of Defense for Health Affairs, 2003) and selected this measure as one of three to highlight within the Military Health System. This direct link between the strategic priorities of the DHCN and Department of Defense measures for success make this measure a desirable and valid choice for monitoring strategic progress.

The data for this measure was obtained directly from the Provider Level Patient Satisfaction Survey. The measure is a percentage of survey respondents who checked the top two boxes in a five point Likert scale, rating their satisfaction with their provider's phone service. The respondents in the survey

were patients who received their care with a DCHN primary care provider. The target for this measure is 83.5%, obtained from the Assistant Secretary of Defense for Health Affairs satisfaction with access FY04 goals (Assistant Secretary of Defense for Health Affairs, 2003).

Support for selection of this measure is also found in an executive level initiative. The DHCN purchased the commercial product Microlog to improve the efficiency and management of phone center. This measure enables the network to track the performance of this initiative and monitor one vital aspect of their patient's perception regarding access to health care.

Objective Measure 5; DHCN Dermatology referrals measures the number of DHCN prime enrollee appointments which are referred to the civilian network. The data for this measure was gathered from the National Capital Area Multi Service Market Organization website. This measure was selected to both monitor an executive level initiative and reduce the number of referrals the DHCN leaks to the civilian network. The target of 28 or less referrals per month was based on September 2004 information and intended to serve as a baseline for this measure.

The DHCN has pursued a strategy of reducing civilian network leaks in an attempt to reduce its purchased care costs and improve the efficiency of healthcare delivery. This strategy aligns with the organization's broader strategic

priority to provide quality garrison health care services. Dermatology was selected over other specialties because of an ongoing initiative and total number of civilian network referrals ("leaks"). Dermatology ranks third in total monthly civilian leaks among DHCN specialty services, trailing orthopedics and gastroenterology.

In October of 2004, the DHCN entered a joint initiative with Marine Corps Base Quantico to share one Dermatology FTE between the two organizations. According to the initiative, the FTE would be shared with the DHCN using .8 of the FTE. The initiative stemmed from a mutual desire to reduce Dermatology civilian network referrals coupled with sufficient demand for the service. The comparatively large volume of civilian dermatology referrals, the presence of an executive level initiative and the strategic alignment of this measure make it a valid selection for this study.

Two objective measures were selected to represent the strategic priority; maintain readiness requirements. Table 5 lists the two measures, unit of measure and target.

Table 5

Strategic Priority: Maintain Readiness Requirements

Number	Objective Measure Name	Unit	Standard
6	DHCN PROFIS Provider Training	Percentage	>92%
7	Individual Readiness	Percentage	<16.42%

Objective Measure 6; DHCN PROFIS provider training was selected to monitor the training and readiness of DHCN PROFIS providers. The ability of the DHCN to support an Army at war with trained providers is clearly a priority for the DHCN. The data for this measure was taken from the Army Medical Departments, Command Management System website. The measure indicates the percent of PROFIS DHCN Providers identified in the Centralized Credentials Quality Assurance System (CCQAS) meeting requirements for Sustained Medical Readiness Training (SMRT). The SMRT requirements include completion of the officer basic course, Provider Area of Concentration compatibility with individual capabilities, clinical competence, wartime provider privileges and field unit training within the previous 12 months. The target for this measure is greater than 92% set by the Army Medical Department's Command Management System.

The multiple elements contained in the SMRT requirements directly align and contribute to the network's priority of maintaining readiness requirements. SMRT requirements provide a measure of how well PROFIS providers are prepared to deploy and support field units. This measure supports the strategic priorities and provides an objective measure of preparedness that focuses on those personnel most likely to deploy.

This measure holds high leverage for improvement because of current SMRT documentation levels in CCQAS. In October, 2004

the DHCN did not report any qualified providers in CCQAS resulting in 0% readiness. This measure holds significant potential for improvement because of the gap between current performance and the target. An executive level initiative which merged the Hospital Education and Training (HEAT) section with Plans, Operations, Mobilization and Security (POMS) section started in November of 2004. The integration of these two sections unified training requirements and PROFIS management under one division. This merger combined with strong leverage for improvement and strategic alignment support inclusion of this measure in this study.

Objective Measure 7; individual readiness provides the command a comprehensive view on how ready the organization's soldiers are ready to deploy. This measure identifies the percentage of DHCN active duty military that are non-deployable based on the information in the Medical Occupational Data System (MODS). The MODS uses a decision matrix to determine whether individual soldiers should be considered non-deployable. The matrix incorporates up to 40 different elements, including medical readiness, that impact the deployable status of a soldier. The data for this measure and the target of less than 16.42% was obtained from the Army Medical Department's (AMEDD) Command Management System Website.

Strategic support for this measure is found in the DHCN's priority to maintain medical readiness as well as guidance from the Department of Defense. The Assistant Secretary of Defense for Health Affairs identifies Individual Medical Readiness as one of three measures to highlight within the MHS (Assistant Secretary of Defense for Health Affairs, 2003). This measure aligns both with the DHCN priorities and Department of Defense, measures for success.

The DHCN began an initiative to improve the accuracy of data in MODS. In addition to the merger between the training and readiness sections, the command tasked 2 personnel solely to focus on updating the MODS information. These two elements demonstrate executive level initiative dedicated to improve the medical readiness information of DHCN personnel.

This study identified three objective measures that collectively assess performance of the network's priority to match resource planning and execution to mission. Table 6 lists the three objective measures.

Table 6

<i>Strategic Priority: Match Resource Planning and Execution to Mission</i>			
Number	Objective Measure Name	Unit	Standard
8	Total DHCN Relative Value Units	Percentage	100.00%
9	Third Party Collections	Dollars	\$159,116.51
10	Primary Care Patients per hour	Patients/Hr.	3

Objective measure 8 clearly meets all three criteria used in the selection process. This measure captures the percentage of Total RVUs reported for the month compared to the number of RVUs targeted in the network's business plan. The percentage is derived by dividing monthly DHCN total reported RVUs by the monthly target laid out in the DHCN FY05 business plan.

The network has launched several initiatives to increase RVU production. New coders were hired in an effort to increase coding efficiency and reduce the coding burden placed on providers. New printers were installed in primary care areas to increase documentation of procedures. Additionally, a data quality process action team was formed to ensure the full and accurate reporting of workload represented by RVUs.

The measure of total RVUs also presents significant leverage for improvement. In FY 2004, the DHCN produced 93.94% of the RVUs the organization projected in their business plan. The difference between the FY 04 reported and projected RVUs accounted for 17481.42 RVUs. Using the Army Medical Department estimated RVU value of \$74, the difference in reported vs. projected RVUs equals approximately \$1.29M (Spencer, 2005). This workload could be used by the DHCN to justify additional resources and accurately depict the value of health care the organization provides.

This measure supports the overarching strategic priority by representing the importance of the relationship found between DHCN RVU production and the RVU volume projected in the organization's business plan. As the Military Health System transitions to the Prospective Payment System (PPS) starting in FY 05, the need to justify resource requirements through workload (RVUs) will increase. In FY 05, Military Services will be resourced up to 25% of the difference between PPS and traditional funding methods for the direct care they provide (Spencer, 2005). In FY 2006 and FY 2007 the percentage increases to 50% and 75% respectively. In FY 2008, the Office of the Secretary of Defense for Health Affairs plans to allocate 100% of direct care resources using the PPS and Capitation (Spencer, 2005). This shift in health care resource allocation supports the strategic alignment and importance of this measure.

The ability of the new governance system to assess the initiatives, make decisions and implement changes will provide a relevant view of the strategic performance improvement within the organization.

Objective Measure 9; third party collections also provide a valuable strategic measure for the DHCN. Third party collections represent a three month rolling average of the sum in dollars of inpatient and outpatient third party collections and monthly medical affirmative claims. A three month rolling

average was used to minimize the impact of large lump sum collections. The target used for this measure (\$159,116.51) is the mean monthly DHCN collections for FY 04. The Mean FY 04 performance will enable the DHCN to assess improvement in this area.

The Third Party Collection Program (TPCP) may represent an opportunity to generate additional revenue for the DHCN. In 2003, Bain and Company conducted a study which examined the Military Health System in the National Capital Area (NCA). The study identified the potential to increase third party collections \$34M within the National Capital Area (Bain & Company, 2003). In FY 04, the DHCN recovered \$1.43M through third party collection and medical affirmative claims. With the largest enrolled population in the NCA Military Health System, the DHCN is well positioned to increase total TPCP Collections. This measure holds high leverage for improvement based on the potential of increasing total collections.

The DHCN has taken several steps to increase the amount collected through third party collections. In October 2004, the DHCN hired an additional clerk for the sole purpose of pursuing Medical Affirmative Claims (MAC). This measure doubled the manpower dedicated to pursuing these claims and marked an investment with the expectation of increased MAC revenue. Additionally, the DHCN Patient Administration Division will hire

4 additional personnel in the spring of 2005 to administer third party collections. The initiative to commit personnel and resources toward improving third party collections shows executive level focus on this measure and adds support for inclusion in this study.

Objective Measure 10; primary care patients per seen hour was selected to monitor and assess the efficiency of patient throughput in primary care. This measure indicates provider efficiency and the processes which support patient encounters. The data for this measure was obtained from the Department of Primary Care monthly report. The measure indicates the number of patients seen per hour calculated by dividing the total DHCN Primary Care patients seen per month by the total Primary Care Provider hours available per month.

Historical levels of this measure indicate the potential for improvement. The target set by the Department of Primary Care is three patients per hour while historical performance in shows a level of approximately 2.5 patients per hour. The DHCN Department of Primary Care has approximately 9400 provider hours available per month. An increase of .25 patients per hour would translate into approximately 2300 additional patients seen per month. The difference between current and desired levels of performance suggests leverage for improvement in this area and supports its selection.

This measure supports the DHCN's strategic priority by indicating how current resources are performing compared to the desired level of patient throughput. The DHCN is a primary care centered organization. Monitoring the efficiency of existing personnel and processes will enable the network to determine the optimum resource mix and guide performance improvement. Beginning in October of 2004 the Department of Primary Care introduced several initiatives which will impact the processes associated with improving efficiency.

The Department of Primary Care is planning to alter their existing organizational structure by divesting three subordinate entities. The Emergency Department will become a stand alone department dedicated to the provision of Emergency Medicine. The Well Women Clinic will be re-organized underneath a new organization, Women's Health Services. OB/GYN will provide oversight of this new organization. Lastly, the Optometry Clinic will be divested from Primary Care and placed under the Department of Surgery. The Department of Primary Care intends to reduce provider administrative requirements and improve the support staff to provider ratios within the Department. These executive level initiatives represent a significant reorganization within the DHCN and support the selection of this measure.

The strategic priority; develop and leverage information management/information technology (IM/IT) opportunities throughout the DHCN is represented by one objective measure in this study. Table 7 lists the measure name, unit of measure and standard.

Table 7

Strategic Priority: Develop and Leverage IM/IT Opportunities Throught the DHCN

Number	Objective Measure Name	Unit	Standard
11	Primary Care ICDB usage	Percentage	>80%

Objective Measure 11; Primary Care Integrated Clinical Database (ICDB) usage was selected to monitor how well the DHCN leverages technology in its operations. The ICDB is a web based system that providers use to electronically document patient interaction. The system can be used for data analysis, coding and paper reduction. The data for this measure was derived from monthly DHCN clinical infomatics reports. The measure is the percentage of primary care visits which use the ICDB compared to the total primary care visits. The target for this measure was subjectively set at 80% based on input from the Clinical Informatics Committee.

The historical use of ICDB has remained around 10% for primary care encounters. The system has had several challenges in becoming widely accepted and used. The two primary issues repeatedly raised in the DHCN clinical informatics committee

stem from the intermittent operation and slow processing speed with the system. The low use rate gives this measure significant leverage for improvement. However, improvements in the operating speed and reliability of the system will be required before any significant improvement is realized.

The DHCN has pursued several initiatives to improve the use rates of the ICDB. The Information Management Division continues to work with higher headquarters to resolve the speed and intermittent operation issues. Although the future use of ICDB remains uncertain, the training providers receive in documenting encounters holds value for the network. The Composite Healthcare System II (CHCS II) will be installed throughout the DHCN beginning in FY 05. CHCS II will require providers to document encounters electronically much like the ICDB. The positive habit transfer obtained through ICDB usage will make the CHCS II transition more seamless to providers. This measure was selected because it holds leverage for improvement and strategically supports leveraging technology to improve the provision of health care.

The final DHCN Strategic priority; ensure the quality development of the new facility is represented by one objective measure. Table 8 identifies the measure for this strategic priority.

Table 8

Strategic Priority: Ensure the Quality Development of the New Facility

Number	Objective Measure Name	Unit	Standard
12	New Hospital Contract Modifications	Modifications	0

Objective measure 12 was selected help the command assess the progression of the development and construction of the new facility. The measure indicates the total number of new hospital contract modifications per month. The data was gathered from the Health Facilities Planning Agency (HFPA) who oversees the construction contract.

According to the HFPA, construction contract modifications usually translate into additional time and or resources necessary to complete the project. The DHCN would like to minimize the number of modifications during construction in order to meet their projected occupancy date in November 2008. This measure strategically supports the quality development of the new facility by helping monitor modifications which hold the potential to delay or increase the cost of the project.

This measure is unique from the standpoint that it is designed to measure the performance of a single task; the development of the new facility. From the strategic perspective, this measure holds a great deal of weight because the new facility will shape future operations and capabilities of the organization. Minimizing the contract modifications will

ensure the facility is constructed using the timelines and plans laid out in the design phase.

Validity and Reliability

The validity of this study is supported by the methodology used in the selection process. The study used three criteria to determine whether an objective measure should be selected. Executive level initiative, strategic support, and leverage for improvement were assessed for each selected measure. The measures meeting these criteria were selected for the study supporting its content validity. These criteria were used to ensure the objective measures that represent the strategic priorities truly measure organizational strategic performance. Performance improvement in the objective measures would indicate a more valid representation of data contained in the information management systems.

Several different data sources provided the information used in this study. The sources are standard data systems used within the Military Health System. The systems include: Composite Health Care System (Ad Hoc Reports), M2 MHS Data Mart, Provider Level Patient Satisfaction Survey, Centralized Credentials Quality Assurance System (CCQAS), Army Medical Department Command Management System and the Medical Occupational Data System (MODS). The information gathered in this study was retrieved from the same systems used by higher

headquarters to benchmark and assess the performance of the DHCN. Executive decisions are made and resources are allocated based on this information. The data in these MHS systems are the focus of strategic performance improvement and are considered internally consistent and reliable.

Results

The application of the three criteria to identify and align twelve objective measures represents the first set of results for this study. The twelve objective measures are listed in Table 2. The performance of these measures over time represents a second set of results from this study. Table 9 lists descriptive statistics for the twelve objective measures.

Table 9

Descriptive Statistics

Objective Measure Name	n	M	SD	Min	Max
Overall DHCN patient satisfaction	5	91.25%	.66%	90.42%	92.23%
Primary Care provider productivity	5	318.23	12.17	302.20	329.87
Open primary care appointments	5	6.29%	.94%	4.99%	7.21%
Overall satisfaction with phone service	5	70.56%	2.09%	68.38%	72.89%
DHCN Dermatology Referrals	5	63.60	38.57	33	131
DHCN PROFIS Provider Training	5	18.57%	41.53%	0%	92.86%
Individual Readiness	5	9.67%	2.23%	7.51%	12.64%
Total Relative Value Units (RVU)	5	85.10%	5.05%	78.15%	90.48%
Third Party Collections	5	\$119,048.08	\$59,871.27	\$65,123.36	\$218,344.08
Primary Care patients per hour	5	2.60	.08	2.52	2.70
Primary Care ICDB usage	4	11.58%	.95%	10.30%	12.57%
New Hospital Contract Modifications	0	0	0	0	0

No results were reported for objective measure 12, number of contract modifications. This measure is intended to be used during the construction phase of the new facility currently programmed to begin in FY 06. Objective Measure 11, ICDB usage, reports only 4 data points because the DHCN stopped tracking the use of the ICDB the week of 25 Jan 05. The cessation of ICDB monitoring is in response to the impending implementation of the CHCS II, scheduled to begin in the 4th quarter of FY 05.

Appendix B lists the target and all data points used in this study. Appendices C-K display the worksheets and individual computations used to calculate the measurement

values. Table 10 lists the net change in units measured and translates the value into percentages. Table 10 compares the first measurement and last measurement of the study while indicating the desired direction of change in addition to whether an improvement was recognized.

Table 10

Objective Measure Analysis of Performance

Objective Measure	1st Value	Last Value	% Change	Desired Direction of Change	Improvement
Overall DHCN patient satisfaction	91.01%	90.42%	-0.59%	Increase	No
Primary Care provider productivity (RVU's)	323.25	308.58	-4.54%	Increase	No
Open primary care appointments	7.21%	4.99%	-2.22%	Decrease	Yes
Overall satisfaction with phone service	72.89%	68.38%	-4.51%	Increase	No
DHCN Dermatology Referrals	48	52	8.33%	Decrease	No
DHCN PROFIS Provider Training	0%	92.86%	92.86%	Increase	Yes
Individual Readiness	12.64%	8.63%	-4.01%	Decrease	Yes
Total Relative Value Units (RVU)	78.15%	86.16%	8.01%	Increase	Yes
Third Party Collections	\$218,344.08	\$87,966.07	-248.21%	Increase	No
Primary Care patients per hour	2.52	2.65	5.16%	Increase	Yes
Primary Care ICDB usage	10.30%	12.57%	2.27%	Increase	Yes
New Hospital Contract Modifications	0	0	0	Decrease	N/A

Among the eleven objective measures that produced results, 6 measures improved in the desired direction while 5 measures declined in performance. The differing units of measure make a percentage change comparison most valuable. Measure 6, DHCN PROFIS provider training improved the most - 92.86%, followed by Measure 8, total relative value units with an 8.01% improvement. The biggest decline in performance was produced by Measure 9, third party collections which dropped 248.21% between the first and last measures. Measure 5, DHCN dermatology referrals produced the second largest percentage drop of 8.33%.

Table 11 compares the last value of each objective in comparison with the measures target. The target percentage comparison represents the percentage (positive or negative) in relation to the target.

Table 11

Objective Measure Performance and Target Comparison

<u>Objective Measure</u>		<u>Target</u>	<u>Last Value</u>	<u>% Target Comparison</u>
Overall DHCN patient satisfaction	>	88.56%	90.42%	1.86%
Primary Care provider productivity (RVU's)	>	329.22	308.58	-6.27%
Open primary care appointments	<	5.70%	4.99%	.71%
Overall satisfaction with phone service	>	83.50%	68.38%	-15.12%
DHCN Dermatology Referrals	<	28	52	-185.71%
DHCN PROFIS Provider Training	>	92%	92.86%	.86%
Individual Readiness	<	16.42%	8.63%	7.79%
Total Relative Value Units (RVU)	>	100.00%	86.16%	-13.84%
Third Party Collections	>	\$159,116.51	\$87,966.07	-180.88%
Primary Care patients per hour	>	3.00	2.65	-11.67%
Primary Care ICDB usage	>	80.00%	12.57%	-67.43%
New Hospital Contract Modifications		0	0	0

Using this comparison, 4 of the 11 objective measures (excluding measure 12) exceed the desired target. Individual readiness shows the highest percentage over the target (7.79%) (decrease is desired) while DHCN Dermatology referrals showed the largest gap in performance (-185.71%). The results show a performance gap in 7 of the 11 objective measures. In addition to DHCN dermatology referrals, third party collections (-180.88%), and Primary Care ICDB Usage (-67.43) show the greatest gap between current and desired performance.

The presence of trends among the objective measures can serve to indicate recent improvement and progression toward

desired targets. In order to aid in trend analysis, Table 12 presents a comparison between the 4th value and last value gathered in this study. The table lists the change in percentage between the two most recent values.

Table 12

Trend Analysis of Objective Measures 4th and Last Value

Objective Measure	4th Value	Last Value	% Change	Desired Direction of Change	Improvement
Overall DHCN patient satisfaction	91.21%	90.42%	-0.79%	Increase	No
Primary Care provider productivity (RVU's)	327.24	308.58	-5.70%	Increase	No
Open primary care appointments	6.70%	4.99%	-1.71%	Decrease	Yes
Overall satisfaction with phone service	72.57%	68.38%	-4.19%	Increase	No
DHCN Dermatology Referrals	54	52	-3.85%	Decrease	Yes
DHCN PROFIS Provider Training	0%	92.86%	92.86%	Increase	Yes
Individual Readiness	8.15%	8.63%	.48%	Decrease	No
Total Relative Value Units (RVU)	81.93%	86.16%	4.23%	Increase	Yes
Third Party Collections	\$65,123.36	\$87,966.07	35.08%	Increase	Yes
Primary Care patients per hour	2.70	2.65	-1.89%	Increase	No
Primary Care ICDB usage*	11.53%	12.57%	1.04%	Increase	Yes
New Hospital Contract Modifications	0	0	0	N/A	N/A

* 3rd and Last Values used

An analysis of trends shows improvement in 6 of the 11 objective measures. The largest percentage gain was DHCN PROFIS provider training (92.86%) followed by third party collections (35.08%). The largest percentage decline between the 4th and last measurement was primary care provider productivity (-5.70%), and overall satisfaction with phone service (-4.19%).

Two measures, DHCN dermatology referrals and third party collections showed improvement when comparing the 4th measure to the last measure but showed a decline in performance when compared with the 1st measure. Conversely, two measures, primary care patients per hour and individual readiness showed a decline in performance from the 4th to the last measure. These two

measures showed improvement in comparison with the first measurement. Appendix L, Figures L1-L11, graphically displays each objective measures performance over the time period used in this study.

Discussion

The intent of this study was to identify objective measures that strategically align with organizational priorities and provide the command a method to monitor progress toward its strategic goals. In the period of time from selection of the measures to the last measurement (approximately five months), the DHCN has made significant strategic changes. The organization is more focused on measures of performance. Weekly Command and Staff meetings include quantitative measures of performance presented by each department or division. Additionally, several re-organization and performance improvement initiatives have been implemented over the course of this study.

The Command focus on measures of performance and the dynamic environment of the National Capital Area Military Health System accentuate the need to continuously review alignment of objective measures and strategic priorities. Based on the changes over the last 5 months the information gathered in this study justifies a re-examination of the measures the DHCN uses to monitor its strategic organizational performance.

Two measures, DHCN PROFIS Provider Training and Primary Care ICDB usage met the criteria for inclusion in this study in October of 2004, but may no longer be valid indicators of strategic progress. DHCN PROFIS Provider Training improved from 0% to 92.86% between January 05 and February 05. This improvement was produced through a dramatic correction of documentation in CCQAS. While continued monitoring of this measure is warranted, its value as a strategic indicator has decreased because it lacks leverage for improvement. In short, the command has successfully bridged the gap between current and desired performance. Similarly, primary care ICDB usage rates have outlived their validity to measure how well the DHCN leverages IM/IT opportunities. In January 2005, the DHCN stopped collecting data for this measure because of a shift in priorities aimed at implementation of CHCS II. CHCS II will become the standard IM system throughout the MHS, while the continued use of the ICDB is at best uncertain.

Strategic level initiatives and changes do not immediately manifest changes in objective measures. Hiring personnel, training, and physical moves require preparation and time before an adequate analysis of their effectiveness can be performed. The period of time used in this study does not provide an adequate amount of time to assess performance improvement. The Department of Primary Care is undergoing significant re-

structuring including physical moves and organizational re-alignment. Objective Measure 2, Open Primary Care Appointments decreased from 7.21% to 4.99% over 5 months. A closer analysis shows that the number of open appointments at Woodbridge FHC decreased from 453 in January 2005 to 24 in February 2005 (Appendix H). This dramatic change may stem from the focused effort of the Primary Care Department to book walk-in patients into open appointments. While the Woodbridge FHC realized this decline, the other primary care facilities may take longer to implement the initiative.

Primary care impacts several measures that have not had enough time for the initiatives and decisions made within the new governance structure to impact results. Overall DHCN patient satisfaction and Primary Care Patients per hour are two prime examples. The divestiture of Optometry, the Emergency Department and Well Women's Clinic have not been completed. The physical move and re-structuring of the Wellness Clinic and the creation of the Family Practice Residents Clinic are additional examples of incomplete initiatives. These changes hold the potential to improve patients' perception of satisfaction and access as well as improve the efficiency of primary care providers.

Objective Measure 6, DHCN dermatology referrals declined in performance 8.33% from the first to the last measure. This

measure is another example in which the initiative intended to improve performance has not been implemented. The joint venture with DHCN and Marine Corps Base Quantico to share one Dermatology FTE remains to be executed. The DHCN suffered a credentialing setback with a Dermatologist designated to fill this position and was forced to conduct another hiring action. The joint MEDCOM, DHCN and Quantico funded venture retains potential to reduce the number of civilian network dermatology leaks. In order to analyze the success of this venture the DHCN will need to continue to monitor dermatology leaks after the FTE is hired and working. The results for this measure reflect no procedural changes but maintain the ability to provide a valid measure of quality and timely healthcare services in the DHCN.

Data quality and the ability of the DHCN to accurately document the healthcare it provides directly impact three of the selected measures. The focus on data quality is geared toward reporting the full amount of healthcare the DHCN provides. The Military Health Systems transition to the Prospective Payment System for resource allocation make these measures a valid indication of strategic performance. Primary care provider productivity, total relative value units, and third party collections are reliant upon quality coding and patient contact documentation. Total relative value units and third party collections revealed improvement from the 4th to the last

measure. While showing improvement during this study, Total RVUs remain 86.16% (Feb 05) of the total projected in the DHCN business plan. Third party collections is trending upward (+35.08% between Jan 05 and Feb 05) following the implementation of itemized billing and the addition of new personnel. Hiring new coders and medical affirmative claims clerks, creating a new business operations cell, and activating a data quality process action team are all initiatives that have not reached mature implementation.

The analysis of data quality related objective measures support their inclusion as objective measurements for strategic performance. Recent improvements in two of these three measures indicate that the command focus and increasing diligence toward healthcare documentation may be driving improvement. Continued monitoring will aid the command in determining if the education, hiring and process analysis are impacting performance. The numerous initiatives, potential for improvement, relevance in future resourcing and position in the DHCN strategic landscape make them valuable indicators of organizational strategic performance.

The selection of the objective measures was performed using three primary criteria. An analysis following the study suggests that two measures, DHCN PROFIS provider training and primary care ICDB usage no longer meet the criteria for

selection. Given the NCA dynamic healthcare environment, a re-examination of newly created or existing objective measures will ensure this tool remains aligned with the organizations priorities. The remaining ten measures of those initially selected, continue to meet the established criteria and remain valid for use in measuring the performance of the DHCN strategic priorities. The results of this study suggest that additional time is necessary to draw conclusions relating to the success of performance improvement initiatives or the overall progress toward DHCN strategic priorities. As new initiatives are implemented and mature, the objective measures can be used to substantiate the success of initiatives and effectiveness of the new DHCN governance structure.

Conclusions and Recommendations

The selection and alignment of objective measures in this study enabled the DHCN to establish performance benchmarks, monitor the progress of the organization and improve performance in the areas related to its strategic priorities. The study identified twelve objective measures while collecting measurements on eleven. Six of the eleven measures improved from the beginning to the end of the study showing an overall weak improvement. The use of a balanced scorecard or dashboard to summarize important measures is not unique in healthcare organizations. The difference with this study involves the

selection of measures that are not only strategically linked, but have executive level focus and possess a performance gap between current and desired levels.

The measures selected in this study hold as much significance toward monitoring strategic performance as the values associated with the measures. The number and significance of changes within the DHCN will need more time to manifest themselves in the measure results. This study provided results for a five month period during a time when many initiatives had not yet been implemented. A strategic evaluation of these measures every six months would provide a better indication of the effectiveness of the governance structure and strategic performance.

The measures used in this tool should be re-evaluated every six months to ensure the measures remain valid in representing the organization's strategic priorities. The responsibility for evaluating and tracking the measures could be assigned to the division or department most logically associated with the particular priority. For example, the strategic priority to develop and leverage IM/IT opportunities could be managed by the Information Management Division.

Retrospectively, the tool may be improved to include a measure to better represent inpatient care. While the DHCN is a primary care focused organization, the inpatient and specialty

care areas were under represented in this study. Opportunities to improve the quality of inpatient care and maximize Relative Weighted Product (RWP) exist within the DHCN. Additionally, removing the sixth and eleventh measure from the study would ensure the tool remains meaningful. Replacement measures meeting the same criteria could help fill in the gap left by these two measures.

The amount of information available to executives continues to increase as systems become more automated. Identifying the correct information to monitor becomes increasingly important as time constraints increase and the world of healthcare management becomes more complex. The information in this study can serve as a basis for monitoring strategic performance. Targeting those areas with the greatest potential for improvement can assist the DHCN in monitoring performance improvement in the areas which support its strategic priorities.

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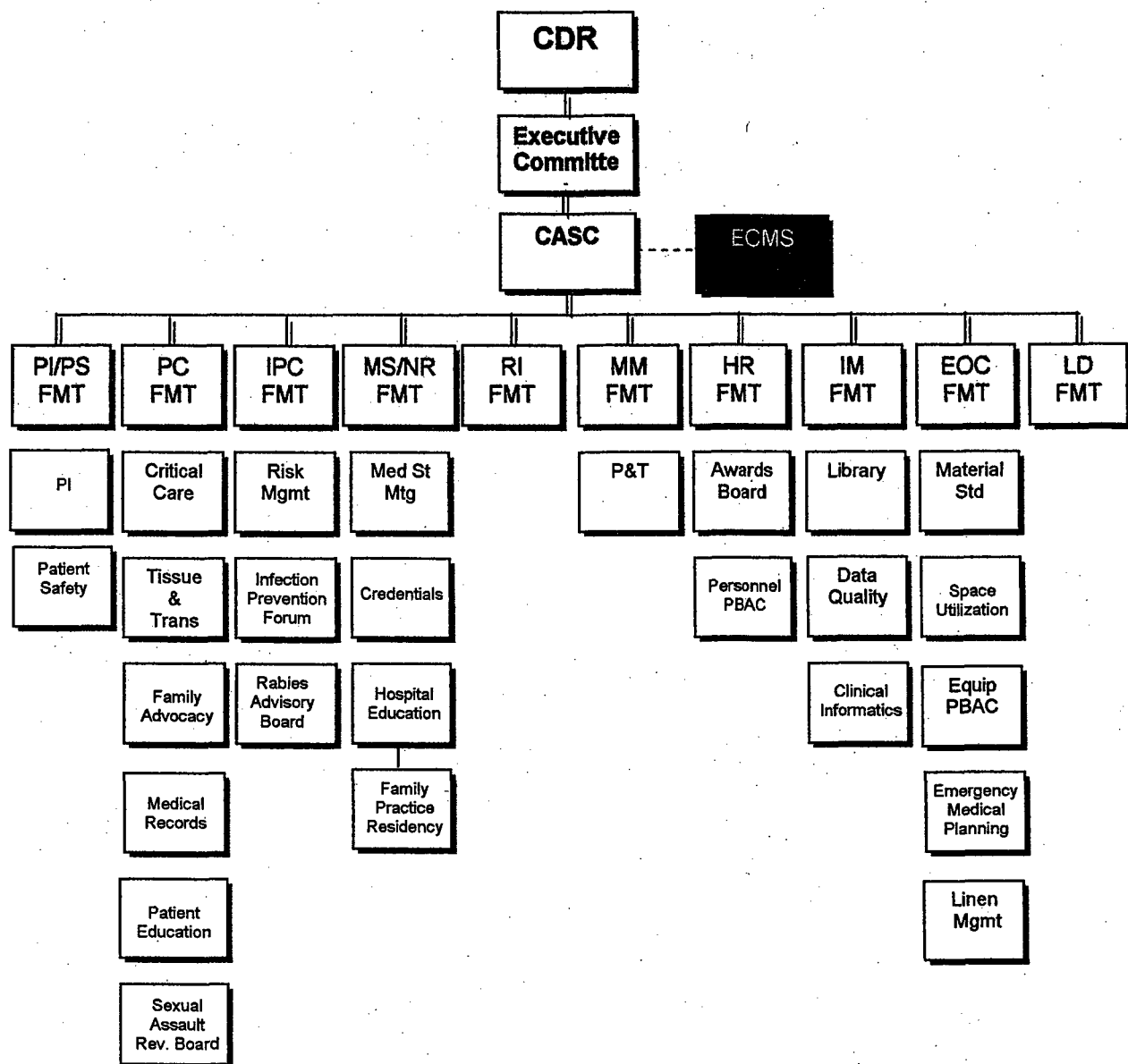
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Appendix A - Functional Management Team Governance Structure



Selection of Organizational Performance Measures Appendix B - Objective Measure Results Summary

FINAL STRATEGIC OBJECTIVE MEASURE RESULTS			1st Value Time Period	2nd Value Time Period	3rd Value Time Period	4th Value Time Period	5th Value Time Period	
Unit of Measure			Time Period	Time Period	Time Period	Time Period	Time Period	
Target								
STRATEGIC PRIORITY 1: PROVIDE QUALITY AND TIMELY GARRISON HEALTH CARE SERVICES								
1	Overall DHCN patient satisfaction	Percentage	88.56%	91.01%	92.23%	91.37%	91.21%	90.42%
			10/25/04-11/21/04	11/22/04-12/19/04	12/20/04-1/16/05	1/17/05-2/13/05	2/14/05-3/13/05	
2	Primary Care Provider productivity	RVU's	329.22	323.25	302.2	329.87	327.24	308.58
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Jan-05
3	Open Primary Care appointments	Percentage	<5.7%	7.21%	5.83%	6.92%	6.70%	4.99%
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Jan-05
4	Overall satisfaction with phone service	Percentage	83.5%	72.89%	70.18%	68.78%	72.57%	68.38%
			10/25/04-11/21/04	11/22/04-12/19/04	12/20/04-1/16/05	1/17/05-2/13/05	2/14/05-3/13/05	
5	DHCN Dermatology Referrals	Referrals	<28	48	131	33	54	52
			October-04	November-04	December-04	January-05	February-05	
STRATEGIC PRIORITY 2: MAINTAIN READINESS REQUIREMENTS								
6	DHCN PROFIS Provider Training	Percentage	>92%	0.00%	0.00%	0.00%	0.00%	92.86%
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Feb-05
7	Individual Readiness	Percentage	<16.42%	12.84%	11.42%	7.51%	8.15%	8.63%
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Feb-05
STRATEGIC PRIORITY 3: MATCH RESOURCE PLANNING AND EXECUTION TO MISSION								
8	Total Relative Value Units (RVU)	Total RVU's	100%	78.15%	90.48%	88.77%	81.93%	86.16%
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Feb-05
9	Third Party Collections	Dollars	\$159,116.51	\$218,344.08	\$127,754.62	\$96,052.27	\$65,123.36	\$87,986.07
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Feb-05
10	Primary Care patients per hour	Primary Care Patients	3	2.52	2.52	2.61	2.70	2.65
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Feb-05
STRATEGIC PRIORITY 4: DEVELOP AND LEVERAGE IM/IT OPP. THROUGHOUT THE DHCN								
11	Primary Care ICDB usage	Percentage	>80%	10.30%	11.91%	11.53%	12.57%	
			10/6/04-11/2/04	11/3/04-11/29/04	1/30/04-12/27/04	1/28/04-1/23/04		
STRATEGIC PRIORITY 5: ENSURE THE QUALITY DEVELOPMENT OF THE NEW FACILITY								
12	Number of Contract/Design Modifications	# of Modifications	0	0	0	0	0	0
			Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Jan-05

Appendix C - Objective Measure 1 Results

Results Objective Measure 1 - Overall Patient Satisfaction				
Overall Patient Satisfaction		14 Feb 05 - 13 Mar 05		
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	91.8	780	71604	
Rader	87.2	238	20753.6	
Fairfax FHC	86	237	20382	
Woodbridge FHC	92.3	392	36181.6	
TOTAL		1647	148921.2	90.42%
Overall Patient Satisfaction		17 Jan 05 - 13 Feb 05		
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	90.2	1010	91102	
Rader	91.5	334	30561	
Fairfax FHC	93	389	36177	
Woodbridge FHC	92.3	539	49749.7	
TOTAL		2272	207589.7	91.37%
Overall Patient Satisfaction		20 Dec 04 - 16 Jan 05		
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	91.5	686	62769	
Rader	89.7	158	14172.6	
Fairfax FHC	88.5	156	13806	
Woodbridge FHC	92.9	270	25083	
TOTAL		1270	115830.6	91.21%
Overall Patient Satisfaction		22 Nov 04 - 19 Dec 04		
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	92.7	848	78609.6	
Rader	89.5	280	25060	
Fairfax FHC	91.1	247	22501.7	
Woodbridge FHC	93.8	406	38082.8	
TOTAL		1781	164254.1	92.23%
Overall Patient Satisfaction		25 Oct 04 - 21 Nov 04		
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	89.9	547	49175.3	
Rader	91.9	248	22791.2	
Fairfax FHC	89.7	262	23501.4	
Woodbridge FHC	93.1	350	32585	
TOTAL		1407	128052.9	91.01%

Appendix D - Objective Measure 2 Results

Results Objective Measure 2 - Primary Care Provider Productivity					
Oct-04					
Facility/DMIS ID	DW 0123	FF 6200	WB 6201	RA 0390	Total
Total Primary Care RVU's	7662.36	3843.55	4964.93	1970.58	18441.42
Total Provider FTE's Worked	19.73	11.55	18.77	7	57.05
RVU's per Provider FTE Worked	388.36	332.77	264.51	281.51	323.25
Nov-04					
Facility/DMIS ID	DW 0123	FF 6200	WB 6201	RA 0390	Total
Total Primary Care RVU's	7063.38	3670.64	4647.73	1750.01	17131.76
Total Provider FTE's Worked	20.03	10.52	19.14	7	56.69
RVU's per Provider FTE Worked	352.64	348.92	242.83	250.00	302.20
Dec-04					
Facility/DMIS ID	DW 0123	FF 6200	WB 6201	RA 0390	Total
Total RVU's	7007.33	3916.65	5218.33	1924.74	18067.05
Total Provider FTE's Worked	20.03	10.67	16.07	8	54.77
RVU's per Provider FTE Worked	349.84	367.07	324.72	240.59	329.87
Jan-05					
Facility/DMIS ID	DW 0123	FF 6200	WB 6201	RA 0390	Total
Total RVU's	7239.69	3980.08	5477.14	2040.89	18737.8
Total Provider FTE's Worked	20.83	11.53	16.9	8	57.26
RVU's per Provider FTE Worked	347.56	345.19	324.09	255.11	327.24
Feb-05					
Facility/DMIS ID	DW 0123	FF 6200	WB 6201	RA 0390	Total
Total RVU's	6854.29	3860.98	5277.28	1895.71	17888.26
Total Provider FTE's Worked	20.69	10.68	18.5	8.1	57.97
RVU's per Provider FTE Worked	331.29	361.51	285.26	234.04	308.58

Appendix E - Objective Measure 3 Results

Results Objective Measure 3 - Open Primary Care Appointments				
Percentage of Open primary care appointments				
				Oct-04
Facility	Templated	Open	Percentage	Open
DeWitt ACH	6400	332		5.19%
Rader	3400	584		17.18%
Fairfax FHC	6674	604		9.05%
Woodbridge FHC	6265	119		1.90%
TOTAL	22739	1639		7.21%
Percentage of Open primary care appointments				
				Nov-04
Facility	Templated	Open	Percentage	Open
DeWitt ACH	6339	359		5.66%
Rader	2714	425		15.66%
Fairfax FHC	6106	183		3.00%
Woodbridge FHC	6066	228		3.76%
TOTAL	21225	1195		5.63%
Percentage of Open primary care appointments				
				Dec-04
Facility	Templated	Open	Percentage	Open
DeWitt ACH	6258	311		4.97%
Rader	3245	652		20.09%
Fairfax FHC	6254	134		2.14%
Woodbridge FHC	7281	497		6.83%
TOTAL	23038	1594		6.92%
Percentage of Open primary care appointments				
				Jan-05
Facility	Templated	Open	Percentage	Open
DeWitt ACH	6427	318		4.95%
Rader	3071	497		16.18%
Fairfax FHC	6594	313		4.75%
Woodbridge FHC	7489	453		6.05%
TOTAL	23581	1581		6.70%
Percentage of Open primary care appointments				
				Feb-05
Facility	Templated	Open	Percentage	Open
DeWitt ACH	6406	256		4.00%
Rader	3241	696		21.47%
Fairfax FHC	6327	176		2.78%
Woodbridge FHC	7092	24		0.34%
TOTAL	23066	1152		4.99%

Appendix F - Objective Measure 4 Results

Results Objective Measure 4 - Overall Satisfaction with Phone Service				
Overall Phone Service Satisfaction 14 Feb 05 - 13 Mar 05				
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	63.3	283	17913.9	
Rader Clinic	72.3	86	6217.8	
Fairfax FHC	74.5	80	5960	
Woodbridge FHC	72.7	142	10323.4	
TOTAL	282.80	591	40415.1	68.38%
Overall Phone Service Satisfaction 17 Jan 05 - 13 Feb 05				
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	63.5	358	22733	
Rader Clinic	75.9	131	9942.9	
Fairfax FHC	78.4	147	11524.8	
Woodbridge FHC	83.3	182	15160.6	
TOTAL	301.10	818	59361.3	72.57%
Overall Phone Service Satisfaction 20 Dec 04 - 16 Jan 05				
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	66.5	246	16359	
Rader Clinic	69	65	4485	
Fairfax FHC	69	60	4140	
Woodbridge FHC	73.5	113	8305.5	
TOTAL	278.00	484	33289.5	68.78%
Overall Phone Service Satisfaction 22 Nov 04 - 19 Dec 04				
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	61.3	356	21822.8	
Rader Clinic	71.4	124	8853.6	
Fairfax FHC	76.2	106	8077.2	
Woodbridge FHC	83.8	174	14581.2	
TOTAL		760	53334.8	70.18%
Overall Phone Service Satisfaction 25 Oct 04 - 21 Nov 04				
Facility	% Top 2 box	n	Raw	Overall %
DeWitt ACH	66.1	163	10774.3	
Rader Clinic	66.7	74	4935.8	
Fairfax FHC	81.4	92	7488.8	
Woodbridge FHC	80.4	104	8361.6	
TOTAL		433	31560.5	72.89%

Appendix G - Objective Measures 5-7 Results

Results Objective Measure 5 - DHCN Dermatology Referrals**DHCN Prime Enrolled Health Net Dermatology Referrals**

Period	Referrals
October-04	48
November-04	131
December-04	33
January-05	54
February-05	52

Source: National Capital Area Multi Service Market Organization Website

Results Objective Measure 6 - DHCN PROFIS Provider Training**DHCN PROFIS Provider Sustained Medical Readiness Training**

Period	Percentage
October-04	0.00%
November-04	0.00%
December-04	0.00%
January-05	0.00%
February-05	92.86%

Source: US Army Medical Department Command Management System

Results Objective Measure 7 - Individual Readiness

Period	Percentage
October-04	12.64%
November-04	11.42%
December-04	7.51%
January-05	8.15%
February-05	8.63%

Source: US Army Medical Department Command Management System

Appendix H - Objective Measure 8 Results

Results Objective Measure 8 - Total DHCN Relative Value Units	
October-04	RVU's
Total DHCN RVU's Reported	41588.36
Monthly RVU Target	53218.19
% of Target	78.15%
November-04	RVU's
Total DHCN RVU's Reported	40223.29
Monthly RVU Target	44457.38
% of Target	90.48%
December-04	RVU's
Total DHCN RVU's Reported	39227.08
Monthly RVU Target	44190
% of Target	88.77%
January-05	RVU's
Total DHCN RVU's Reported	40023.49
Monthly RVU Target	48851.92
% of Target	81.93%
February-05	RVU's
Total DHCN RVU's Reported	39035.17
Monthly RVU Target	45307.61
% of Target	86.16%
Source: M2 29 March 2005	

Appendix I - Objective Measure 9 Results

Results Objective Measure 9 - Third Party Collections					
Period	TPCP Inpatient	TPCP Outpatient	Medical Affirmative Claims	Total	3 Month Rolling Average
Aug-04	\$40,002.85	\$304,249.50	\$7,357.42	\$351,609.77	n/a
Sep-04	\$6,704.54	\$153,456.25	\$9,639.83	\$169,800.62	n/a
Oct-04	\$0.00	\$123,909.56	\$9,712.31	\$133,621.87	\$218,344.09
Nov-04	\$16,230.62	\$39,208.81	\$24,401.94	\$79,841.37	\$127,754.62
Dec-04	\$4,766.21	\$31,526.26	\$8,638.70	\$44,931.17	\$86,131.47
Jan-05	\$4,900.00	\$21,445.92	\$14,489.21	\$40,835.13	\$55,202.56
Feb-05	\$10,550.43	\$125,864.91	\$11,954.17	\$148,369.51	\$78,045.27
Source: DeWitt Army Community Hospital Treasurers Office					

Appendix J - Objective Measure 10 Results

Results Objective Measure 10 - Primary Care Patients per hour			
Average Primary Care Patients/Hour			
	Patients	Hours	Pts./Hr
October-05			
DeWitt ACH	9199	3157	2.91
Rader	2787	1181	2.36
Fairfax FHC	5845	2125	2.75
Woodbridge FHC	6060	3003.5	2.02
TOTAL	23891.0	9466.5	2.52
Average Primary Care Patients/Hour			
	Patients	Hours	Pts./Hr
November-05			
DeWitt ACH	9163	3295	2.78
Rader	2280	1117	2.04
Fairfax FHC	5687	1936	2.94
Woodbridge FHC	5785	2758.8	2.10
TOTAL	22915.0	9106.8	2.52
Average Primary Care Patients/Hour			
	Patients	Hours	Pts./Hr
December-05			
DeWitt ACH	9506	3365	2.82
Rader	2613	1339	1.95
Fairfax FHC	5888	1963.75	3.00
Woodbridge FHC	6784	2829	2.40
TOTAL	24791.0	9496.75	2.61
Average Primary Care Patients/Hour			
	Patients	Hours	Pts./Hr
January-05			
DeWitt ACH	9619	3333	2.89
Rader	2581	1166	2.21
Fairfax FHC	6003	2121	2.83
Woodbridge FHC	7036	2716	2.59
TOTAL	25239.0	9336	2.70
Average Primary Care Patients/Hour			
	Patients	Hours	Pts./Hr
February-05			
DeWitt ACH	9624	3354.5	2.87
Rader	2575	1237	2.08
Fairfax FHC	5931	1964.5	3.02
Woodbridge FHC	6684	2817	2.37
TOTAL	24814.0	9373	2.65
Source: Department of Primary Care Monthly Report			

Appendix L - Objective measure performance over time

Figure L1. Objective Measure #1 performance over time

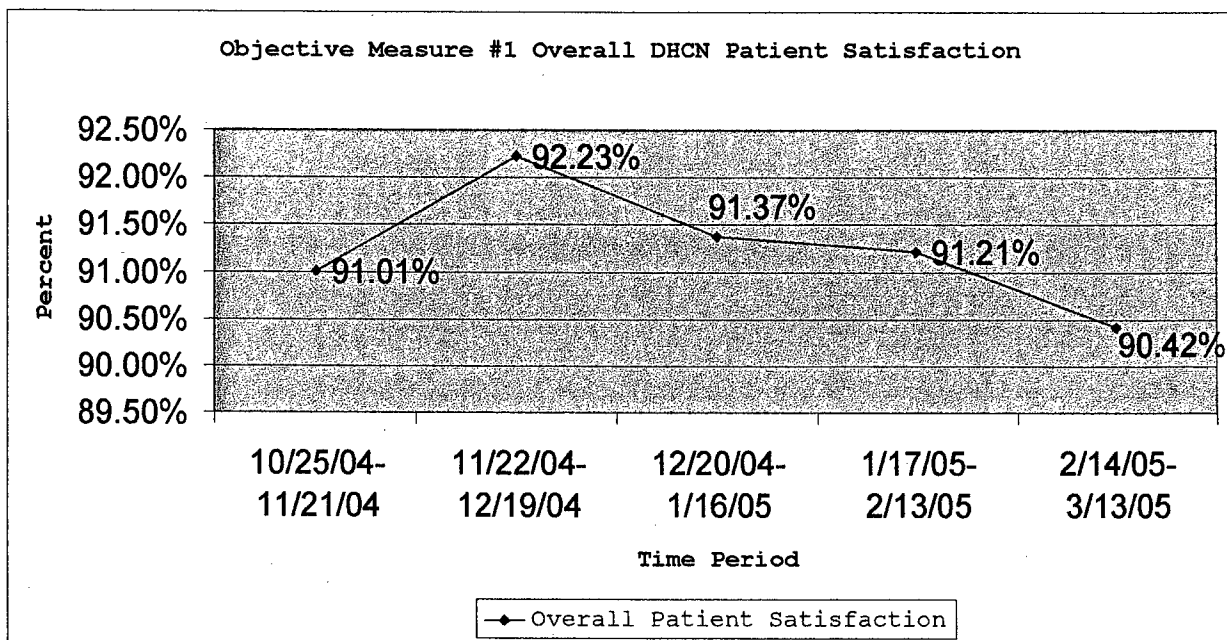


Figure L2. Objective Measure #2 performance over time

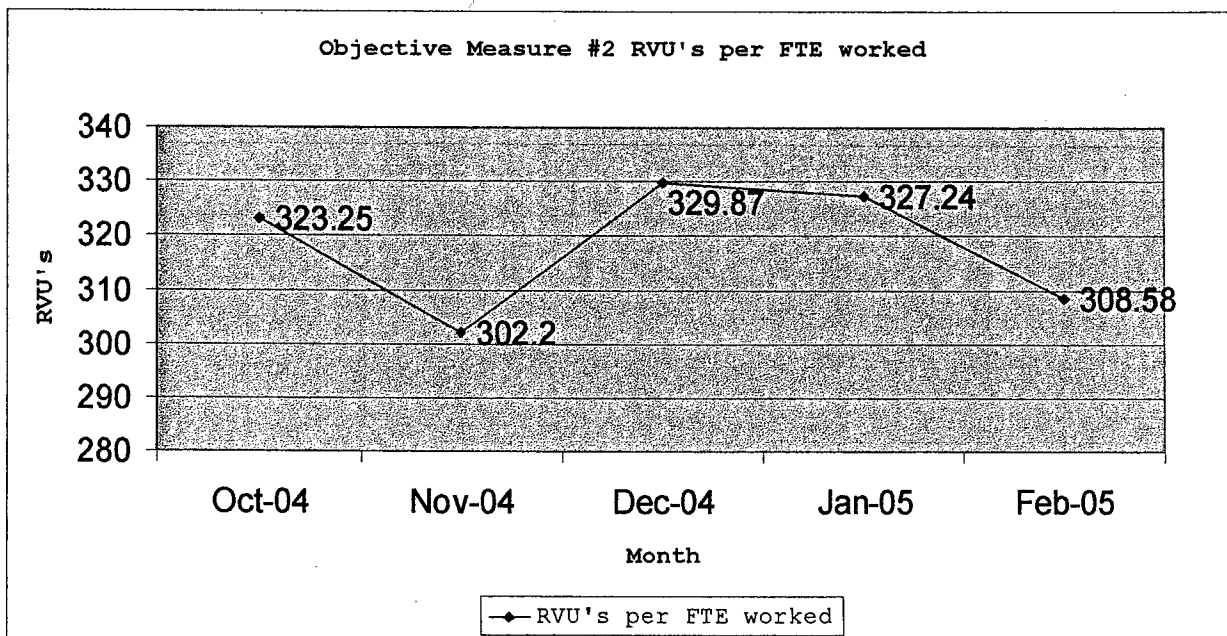


Figure L3. Objective Measure #3 performance over time

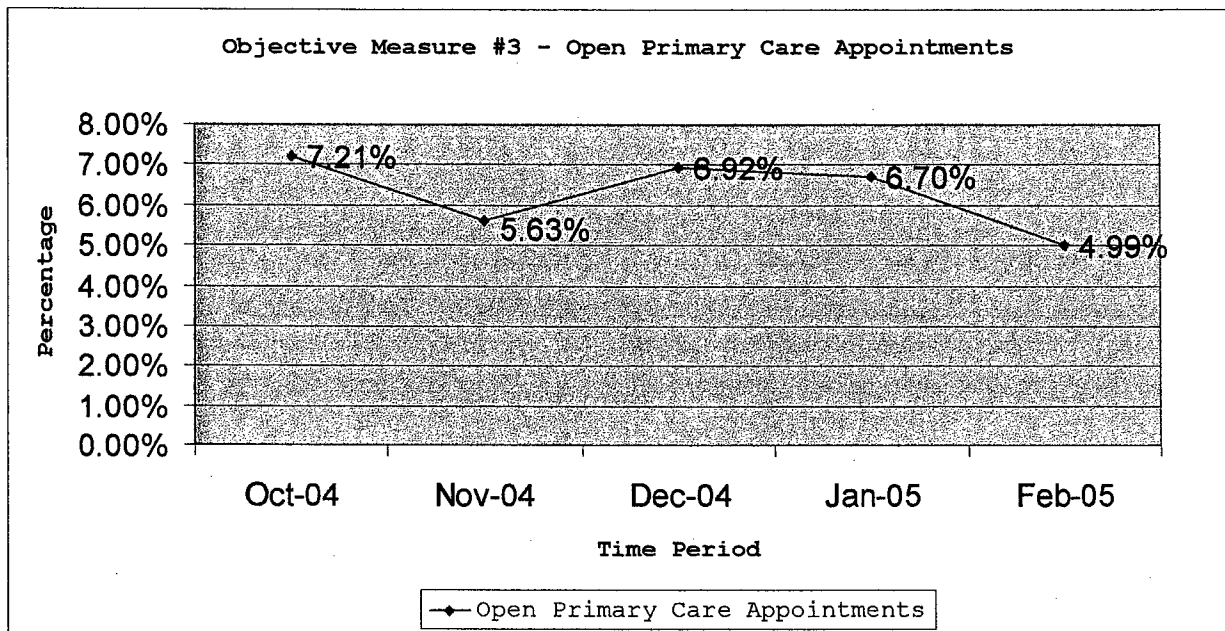


Figure L4. Objective Measure #4 performance over time

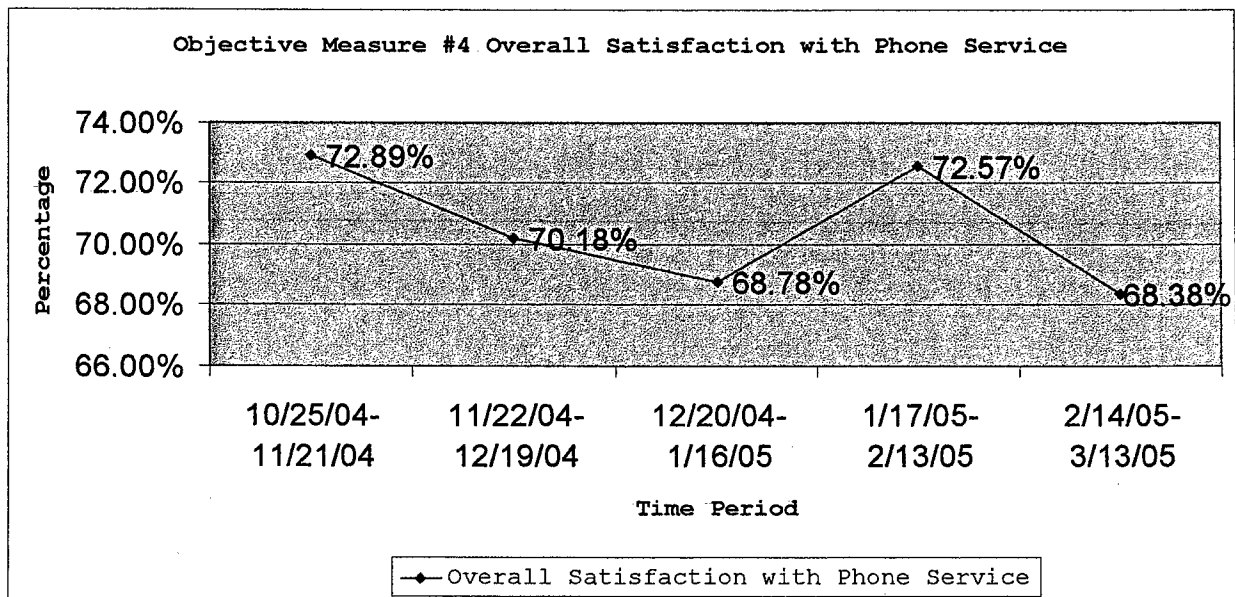


Figure L5. Objective Measure #5 performance over time

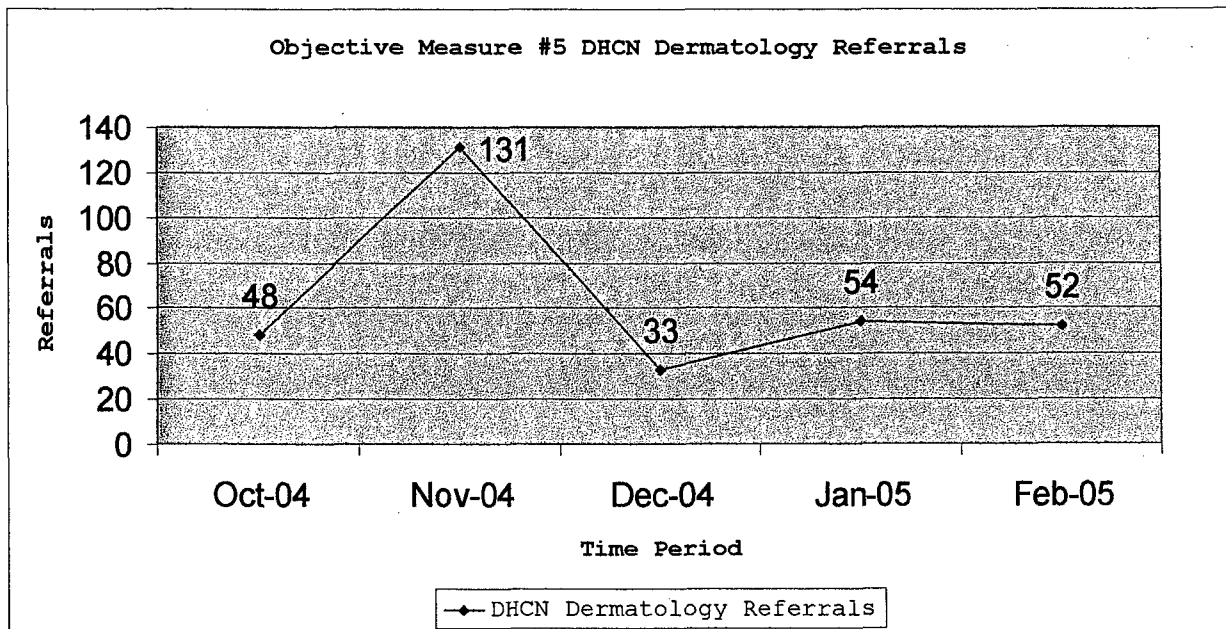


Figure L6. Objective Measure #6 performance over time

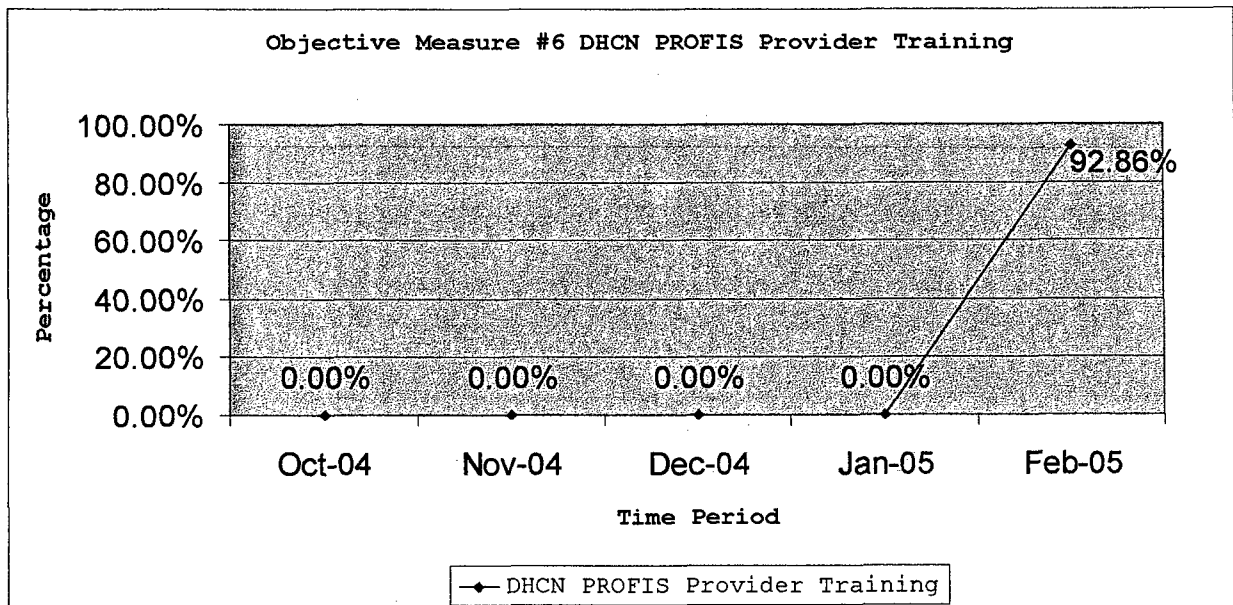


Figure L7. Objective Measure #7 performance over time

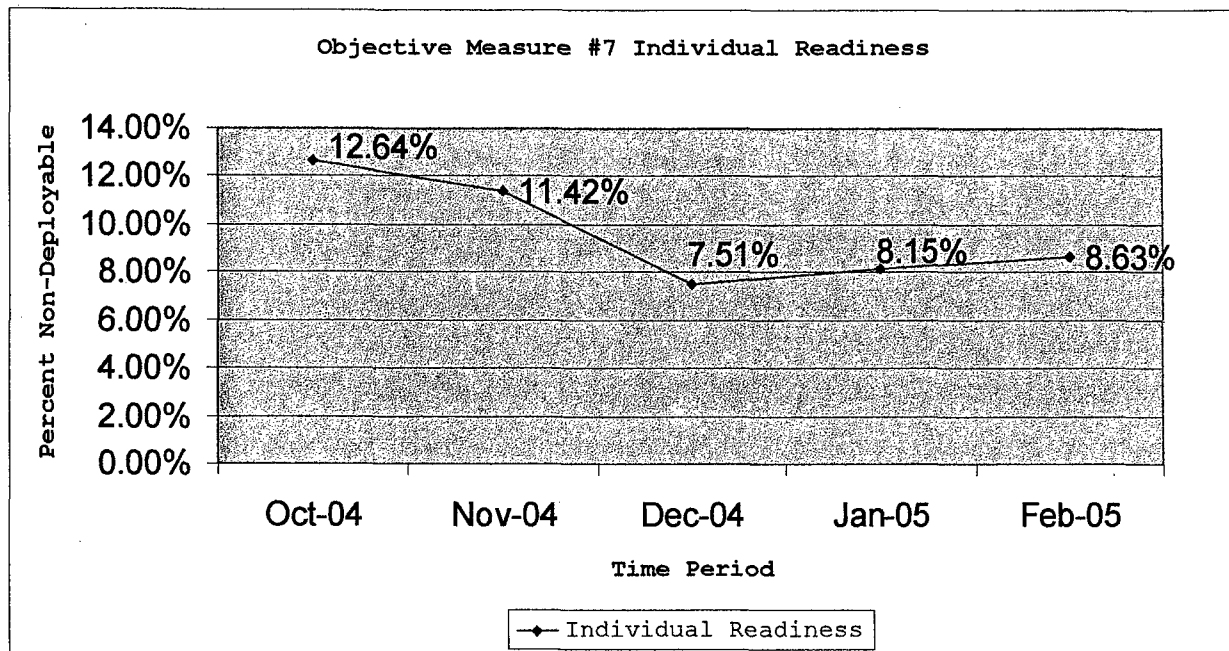


Figure L8. Objective Measure #8 performance over time

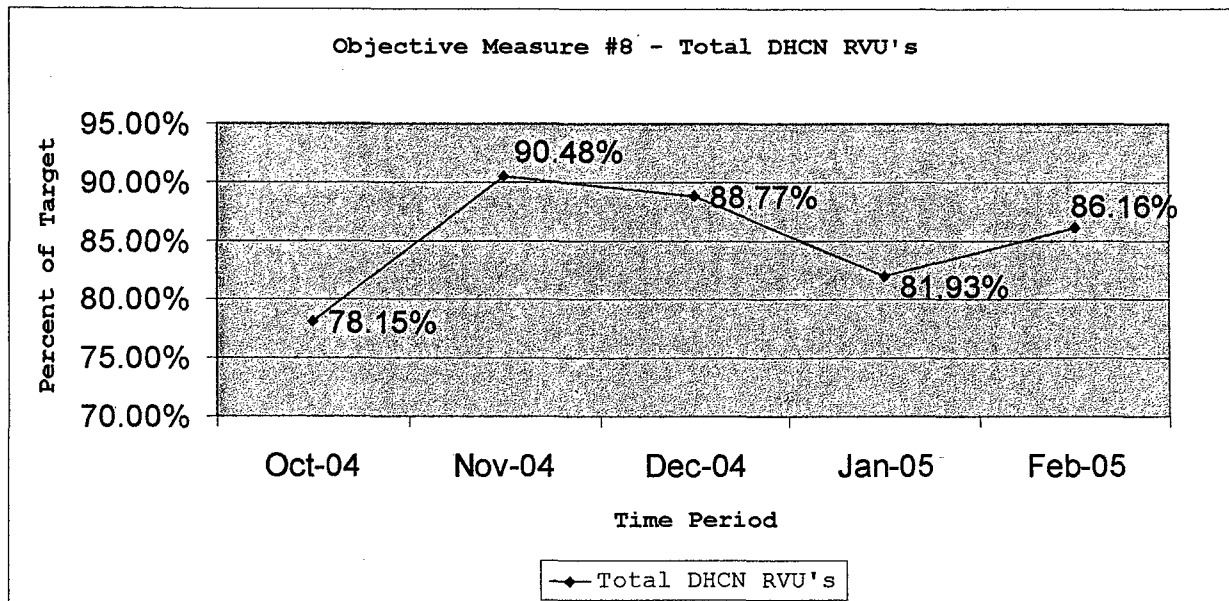


Figure L9. Objective Measure #9 performance over time

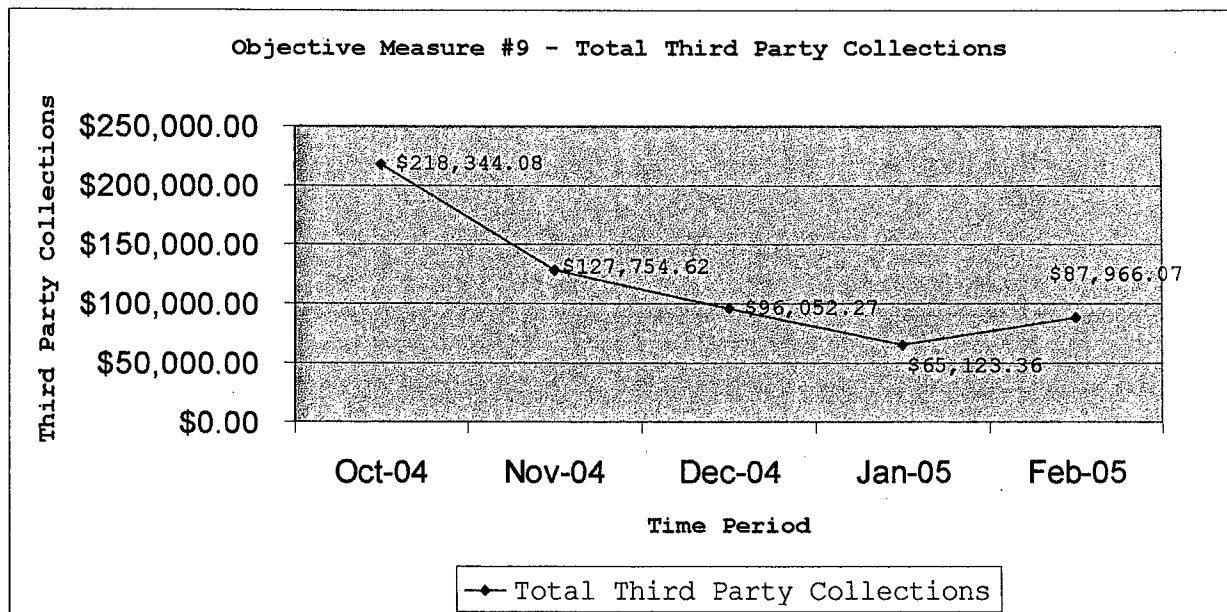


Figure L10. Objective Measure #10 performance over time

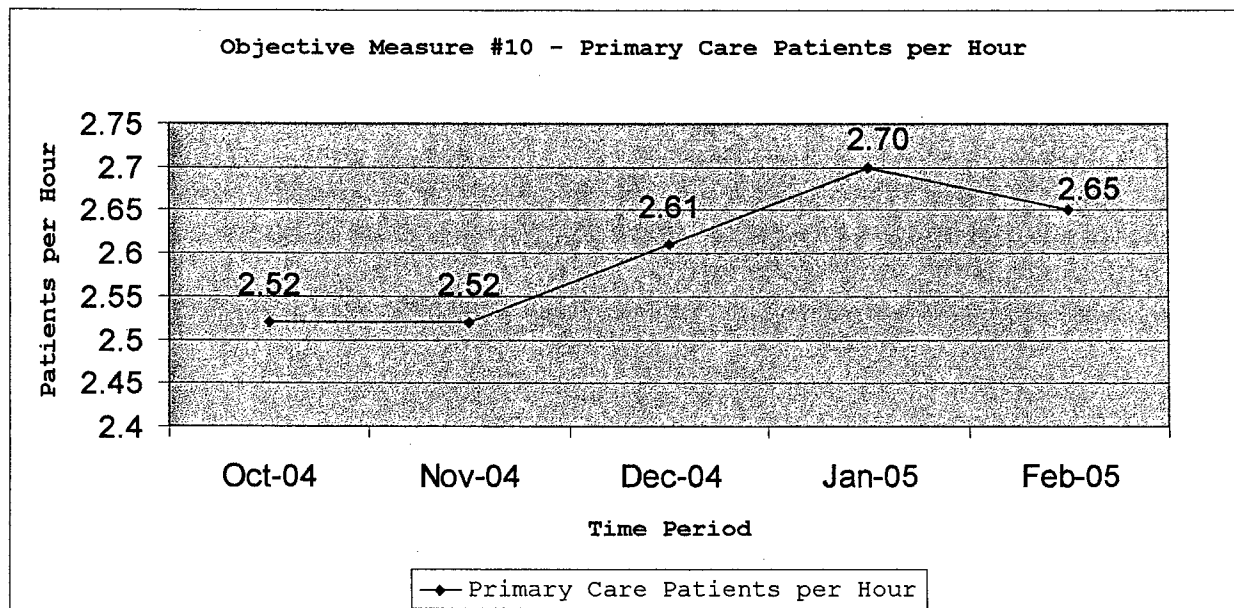


Figure L11. Objective Measure #11 performance over time

