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Integrating Health Care Systems to Maintain Quality Care and to Manage Cost

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This is to certify that the doctoral dissertation by

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Abstract

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The rising cost of health care in the Philippines is a concern for the Department of Defense and TRICARE beneficiaries. The purpose of this quantitative cross-sectional research study was to determine the efficacy and acceptability of a different method to deliver health care to increase access to health care and decrease out-of-pocket costs while maintaining quality of care for TOP Standard beneficiaries who receive health care under the Philippine Demonstration. Secondary data was used to determine the acceptability of an alternative reimbursement methodology to decrease cost but maintain access to quality care. The Andersen's behavioral health care model and the Donabedian quality health care model were used to interpret the study results. A data set of 180 participants was evaluated using a cross-sectional quantitative methodology. Two Spearman correlations were used to examine the relationship between financial burden and satisfaction ($r = .41$, $p < .001$) and financial burden and confidence ($r = .44$, $p < .001$). Linear and binary regressions assessed the effects of age and gender on satisfaction with health care finder functionality when requesting a waiver ($F(2,26) = 1.22$, $p = .313$, $R2 = .09$). A computation of one-sample t-tests to determine the impact of a closed network, beneficiary out-of-pocket cost, and quality health care in Demonstration areas found the beneficiaries were satisfied with the demonstration. An analysis of the claims data pre and post demonstration showed a difference in the patients' out-of-pocket expenses and the acceptability and preference for a closed network. Social change was demonstrated by a decrease in the cost for TRICARE standard beneficiaries in the Philippines.

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Dedication

I dedicate this dissertation to my parents, sisters, and brother. I wish my mother, Minnie, father, Elmer, brother, Gene, and sister, Linda, were here to see the results of my hard work and dedication to advance the body of knowledge in my profession. I also dedicate this dissertation to my husband of 27 years, Charles, and my in-charge bichon frise, Amadeus, for their support and patience during this entire process.

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I want to acknowledge Dr. Eboni Green for her continued support and encouragement throughout the dissertation process. During the dissertation process, I experienced great losses in my life. My best friend passed, 6 months later my mother passed, 6 months later one of my sisters passed, and one of my aunts passed 3 weeks later. Talking with Dr. Green and reading her book on grief gave me great comfort. I want to acknowledge Norman Mitchell, my grief counselor, for taking the time to work through my grief with me. Sometimes speaking with Norman scared me because it was if he could read my mind, what I was thinking. Thank you, Dr. Green and Norman, for all that you do.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction and Background

The Department of Defense (DoD) is responsible for overseeing the Military Health System (MHS), the means for providing care to military members, retirees, and eligible family members. The MHS is the primary source of rendering health care in military treatment facilities (direct care system), which is augmented by care provided under the Civilian Health and Medical Program of the Uniformed Service (CHAMPUS)/TRICARE in the private sector (purchased care) in the United States and overseas. Outside the United States and its territories, except for the District of Columbia, CHAMPUS/TRICARE is referred to the TRICARE Overseas Program (TOP), which is the same CHAMPUS/TRICARE program administered in the United States, with the overseas cultural differences and nuisances for every country being taken into consideration.

The DoD is concerned with escalating health care costs throughout the MHS. In general, the rising costs of health care can be attributed to factors including advanced technology, people living longer, fraud and abuse, inflation, changes in physicians' philosophy in treating their patients, and malpractice suits. This research focused on the exorbitant rise in health care costs in the Philippines. According to Scott (2006), the excessive increase in health care costs in the Philippines caught the attention of the DoD's Office of the Inspector General (DoDIG), prompting an investigation into improper payments to providers and third-party billing agencies and waiving of beneficiaries' deductibles and cost shares. The DoDIG found that the Defense Health

Agency (DHA), formerly TRICARE Management Activity (TMA), paid $2.87 million in fiscal year (FY) 1988 and $64.19 million in FY 2003 for health care in the Philippines (Scott, 2006). These amounts reflected a 2,135% rise in health care costs over a 6-year period to a population that had remained relatively stable throughout 5 plus years (Scott, 2006). The DoDIG recommended that DHA implement provisions of accountability for claims submitted by providers and third-party billing agencies that submit claims on behalf of the providers and initiate steps toward ensuring that providers do not waive the cost shares and deductibles of beneficiaries (Scott, 2006). The DoDIG conducted an audit to examine inaccurate reimbursements of TRICARE claims and the necessity for the establishment of negotiated rates for health care services rendered overseas (Prinzbach, 2008).

The DoDIG also conducted an audit from July 2009 through June 2011 to assess the certification of Philippine providers who rendered health care to military retirees and their families and the process for adjudicating the claims associated with health care (Carey, 2011). The audit found that the TOP contractor who was responsible for provider certification failed to "provide adequate documentation to support 28 of 63 certifications of medical providers," and the overseas claims processor failed to verify the addresses of TRICARE beneficiaries before mailing reimbursement checks (Carey, 2011). The DoDIG reported that beneficiaries were in jeopardy of receiving care from providers who were not certified and licensed and that beneficiaries did not receive reimbursement from TRICARE because their addresses were never confirmed (Carey, 2011).

The DoDIG audits recommended several areas in which the DoD could reduce the cost of health care in the Philippines. As a result, the DHA implemented several administrative controls in the Philippines that lowered the cost of health care somewhat, but other cost containment measures are still necessary. Therefore, the DHA devised a plan to implement the DoD TRICARE Philippine Demonstration Project (Philippine Demonstration) as a cost containment measure and fraud deterrent.

The following sections include the problem statement, research questions and associated hypotheses, the theoretical basis for the study, the nature and scope of the study, and its assumptions, delimitations, and limitations. The chapter concludes with a section on the professional and social implications of the study that addresses how the study contributes to the delivery of an alternative health care model and social change.

Problem Statement

TMA (2008a) identified a major concern in the Philippines with rising health care costs. The Philippines has a reputation for ubiquitous health care fraud within TRICARE, so the DHA of the DoD implemented administrative controls to deter fraud in the Philippines (TMA, 2008a). In 2013, the DHA implemented the DoD TRICARE Philippine Demonstration because the administrative controls were not enough to deter fraud and decrease health care costs.

The purpose of this quantitative cross-sectional research study was to determine the efficacy and acceptability of a different method to deliver health care to increase access to health care and decrease out-of-pocket costs while maintaining quality of care

for TOP Standard beneficiaries who receive health care under the Philippine Demonstration.

Gaps in the Literature

Scholars have addressed country-specific health systems, rising medical costs, cost containment strategies, reimbursement methods, and fraudulent claims submissions in extensive literature writings. I am not aware of any literature with controlled studies that integrates the MHS with foreign health care systems testing a different method of providing health care. The Philippine Demonstration is the first time the DoD has tested an alternative method of providing care in a foreign country. The DoD conducted a demonstration testing an alternative method of delivering health care to beneficiaries and active service members in the 1990s in 11 states under the CHAMPUS Reform Initiative during the managed care era (Anderson, Hosek, & Bloomfield, 1994). This demonstration resulted in the addition of a health maintenance organization option and a preferred provider organization (PPO) option to CHAMPUS.

Purpose of the Study

The cost of health care continued to rise in the Philippines, while the number of TRICARE beneficiaries has remained the same. According to TMA (2008a), the Philippines is known for its widespread health care fraud against the TRICARE program. The DHA implemented administrative controls such as proof of payment, prepayment review, boots-on-the-ground validation and certification, a government-directed foreign-fee schedule, and attestation, but these controls alone have not been sufficient to address the problem (TMA, 2008a). As an alternative method of health care delivery, the DoD

TRICARE Philippine Demonstration was conceptualized as a resolution to provide beneficiaries using the TRICARE Standard option access to quality care as well as to control health care costs without jeopardizing access to quality care.

Therefore, the purpose of this quantitative cross-sectional research study was to determine the accessibility and acceptability of health care received under the Philippine Demonstration for TOP Standard by beneficiaries, retirees, family members, and TRICARE for Life beneficiaries who reside in the Philippines.

Nature of the Study

This study was of a quantitative nature. I used the quantitative research design to address questions regarding access to care, cost, and quality of care for the TRICARE Standard population who reside in the Philippines and receive care in designated Demonstration areas (Creswell, 2009). Essentially, I adopted a postpositivist view (see Creswell, 2009) using Andersen's (1995) behavioral model of health services use and used Donabedian's (1990) quality model to assess patient experience and satisfaction.

Research Question and Hypotheses

I derived the following research questions (RQs) from the DoD TRICARE Philippine Demonstration Beneficiary Satisfaction Survey:

RQ1: How has the Demonstration affected the beneficiaries' financial burdens and confidence that their health care needs will be met?

$H_0 1_a$: There is no statistically significant relationship between financial burdens and satisfaction with the Demonstration overall.

H_a1_a: There is a statistically significant relationship between financial burdens and satisfaction with the Demonstration overall.

H_01_b: There is no statistically significant relationship between financial burdens and confidence that health care needs will be met.

H_a1_b: There is a statistically significant relationship between financial burdens and confidence that health care needs will be met.

RQ2: What is the relationship between gender, age, and health care finder functionality for accessing quality health care under the Demonstration in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo?

H_02_a: There is no statistically significant relationship between gender, age, and health care finder functionality access to quality health care in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo.

H_a2_a: There is a statistically significant relationship between gender, age, and health care finder functionality access to health care in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo.

RQ3: What is the relationship between a closed network, actual beneficiary out-of-pocket cost, and quality health care in Demonstration areas?

H_03_a: There is no statistically significant relationship between actual beneficiary cost and a closed provider network.

H_o3_a: There is a statistically significant relationship between actual beneficiary out-of-pocket cost and a closed provider network.

$H_0 3_b$: There is no statistically significant relationship between quality health care and a closed provider network.

$H_a 3_b$: There is a statistically significant relationship between quality health care and a closed provider network.

Beneficiaries' Actual Out-of-Pocket Costs

In order to determine if beneficiaries out of pocket costs decreased, it is imperative to conduct an analysis of their out of pocket costs for calendar years 2011, 2012, 2013, 2014, and 2015 in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo decrease or increase. Prior to the Philippine Demonstration, beneficiaries paid a deductible and cost share plus balancing billing. After the implementation of the Philippine Demonstration, beneficiaries paid a deductible and cost share. It is my assumption that beneficiaries' overall out-of-pocket costs would increase initially because greater than half the TRICARE beneficiaries were not using the TRICARE benefit. As more beneficiaries use the TRICARE benefit and receive care from approved demonstration providers, the cost should eventually decrease.

Theoretical Base

As a theoretical framework, I used Andersen's behavioral model of health services use and Donabedian's quality model are used to explain the study results. The goal of Andersen's (1995) model was "to provide measures for access to medical care" (p. 4) to include potential, realized, equitable, and inequitable access. Andersen enhanced the model to include measures important for health policy and reform. Andersen's model in the third phase measures for effective access as shown by improved health status

through use or beneficiary satisfaction. Efficient access is based on health status and increased satisfaction in relation to the consumption of health care (Andersen, 1995). Donabedian's (1980) quality assessment of health care was based on the experience of the patient. Donabedian's (1980) quality assessment model looks at how the patient defines quality based on his or her values and expectations.

The theoretical foundation for this study, presented in depth in Chapter 2, was the Andersen's behavioral model access utilization and Donabedian's quality assessment. For this study, access was defined as the entry point when a patient enters the health system. Operational definitions for other concepts used in this study are listed in the following section.

I present a more detailed description of the theoretical framework as well as the conceptual model that grounds this study in Chapter 2.

Definition of Terms

Definitions of terms used in this study were as follows:

Access: The point of entry where a patient enters the health care system.

Approved Demonstration provider: A provider in the Philippines who has agreed to participate in the DoD TRICARE Philippine Demonstration. This provider has agreed to accept the TRICARE-allowed amount that includes the beneficiary cost share and deductible and submit claims for the TRICARE beneficiaries for medical services provided. The provider has also agreed to meet the terms of on-site verification, certification, and credentialing according to TRICARE regulations and policies. An

approved Demonstration provider may opt to require TRICARE beneficiaries to pay their deductible and cost shares up front for services provided.

Certified Philippines provider: A provider who has met the on-site verification, certification, and credentialing requirements. This provider has not agreed to accept the TRICARE allowed amount that includes the beneficiary cost share and deductible or to submit claims for TRICARE beneficiaries for medical services provided. This provider can require TRICARE beneficiaries to pay the entire bill in full up front for services provided.

Civilian Health and Medical Program of the Uniformed Service (CHAMPUS): Medical program established to provide care to family members and retired military members in the private sector.

Health care fraud: Providers intentionally bill services at a higher level suitable for the services rendered to the patient.

Power purchasing parity: Calculating the exchange rate of currency for different countries in order to purchase the same goods in one country at the same rate in another country.

Quality of health care: Consists of structure, process, and outcome as defined by Donabedian (1966).

TRICARE beneficiary: A military service member, retired service member, or eligible family members of the military or retired service members. For the purposes of the DoD TRICARE Philippine Demonstration, TRICARE beneficiaries were retired

service members and eligible family members of the military and retired service members living in the Philippines.

TRICARE program: The DoD managed care program that allows for competitive selection of contractors who are willing to take financial risks for health care delivery under CHAMPUS (TMA, 2009). The implementation of TRICARE was an enhancement to CHAMPUS introducing TRICARE Prime (DoD health maintenance option), TRICARE Extra (preferred provider option), and TRICARE Standard (basic CHAMPUS fee-for-service).

TOP: The TRICARE health care program administered overseas and in the U.S. territories, except for the District of Columbia. There is one option available overseas for nonactive service beneficiaries, the TOP Standard option.

Assumptions

TRICARE Standard beneficiaries residing in the Philippines compose a small segment of the Filipino population accessing health care. The DoD TRICARE Philippine Demonstration hinges on providers in the civilian sector joining a closed network of providers to provide care to TRICARE Standard beneficiaries and accepting what TRICARE allows as payment in full. I assumed that some TRICARE beneficiaries residing in the Philippines would be resistant to receiving care under the Demonstration, while other beneficiaries would welcome the alternative method of delivering health care for a decrease in out-of-pocket costs and an increase in access to quality health care. I expected that age and gender would have an impact on the health care functionality.

Limitations

The accuracy of the CHAMPUS/TRICARE beneficiary contact information was a major limitation for the Beneficiary Satisfaction Survey. For example, a beneficiary may not have updated their address or telephone number in the Defense Enrollment Eligibility Reporting System (DEERS), the official system of record for CHAMPUS/TRICARE beneficiaries. These beneficiaries input their personal contact information, such as mailing address, telephone number, and e-mail address (this is not a required field) in DEERS. Like any database, the information is only as good as the data that goes into the database. If beneficiaries did not update their information, their chances for participating in the survey were decreased. Outreach to the beneficiaries in the Philippines informing them to update their personal information via the DHA's Web site or the TOP contractor's Web site should have minimized this limitation.

The country code listed in DEERS for Philippines addresses is "PHL"; however, the country code listed for an Army Post Office or Fleet Post Office (APO/FPO) address in the Philippines is "US." The "US" country code automatically excluded a legitimate APO/FPO address in the Philippines, thus eliminating potential respondents for the survey. The inclusion of the zip code for the APO/FPO address as a data element should have resolved this limitation. Although Tagalog is the native language in the Philippines, English is a familiar language in the Philippines. Some beneficiaries who do not speak English can opt to have someone in the household translate. If beneficiaries required a translator, the interviewer should have required the beneficiary to authorize the interviewer to speak with the individual in the household as a translator. The interviewer

should have documented the authorization to show there was no breach of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). There is a possibility in which beneficiaries with one e-mail address per household may not have received a survey to avoid violating HIPAA. The only way the beneficiary could receive a survey via e-mail was to notify the DHA official appointed to oversee this survey and provide authorization to send a survey via e-mail if the beneficiary met the criteria to participate in this survey.

Telecommunications barriers exist in the Philippines because some beneficiaries may only have a mobile telephone. In cases such as this, the beneficiary may not have answered the telephone or had the telephone set up not to accept incoming calls because the call would use the minutes on the telephone plan. If the beneficiary had a usable e-mail address, the survey could have been sent via e-mail. There were other barriers, such as an incorrect telephone number in DEERS that could have been be remedied by the beneficiary updating their contact information in DEERS.

Delimitations

This study was delimited to TRICARE Standard beneficiaries who lived in the Philippines and received health care from approved Demonstration providers in designated Demonstration areas from January 1, 2013, through December 31, 2015. The purpose of this study was to evaluate the patient's experience to determine the efficacy and acceptability of the Philippine Demonstration, focusing on outcome measures for access to quality of health care and beneficiaries' financial burdens. I used secondary data from a Beneficiary Satisfaction Survey directed to respondents who received health care

during all phases of the Demonstration. This research confirmed if the DoD met its objective, decreasing out-of-pocket costs for beneficiaries while ensuring that the beneficiaries maintained access to quality health care in the Philippines.

Significance of the Study

According to Schoen et al. (2010), the health insurance design affected access, cost, and experience of care in various countries. The Philippine Demonstration will allow the DoD to determine whether it is possible to control costs, reduce aberrant claims activity, and eliminate balance billing issues while providing high-quality, safe, and effective health care to TRICARE Standard Overseas beneficiaries who reside in the Philippines and receive care in designated Demonstration areas (TMA, 2008). The alternative method will change the reimbursement methodology, reducing out-of-pocket costs and eliminating payment in full of services up front, thus alleviating financial burdens for beneficiaries.

The Philippine Demonstration would have a major impact on health care delivery for TRICARE Standard beneficiaries residing in the Philippines and providers rendering services to these beneficiaries. The engagement of cultural and economic differences in two very distinct health care systems, the MHS and the Philippines health care system, would merge, creating social change.

Professional Application

The DoD will assess the efficiency and acceptability of the Demonstration during and at the end of the 3-year Demonstration. If it is successful, there is a possibility that a closed network of preferred providers may be implemented throughout the Philippines. A

closed network of preferred providers could become the premier health care delivery model for TRICARE Standard beneficiaries who receive health care overseas.

Access to providers in the Philippines was never a concern because TRICARE Standard beneficiaries had the option to see any TRICARE certified provider. The implementation of a closed network of preferred providers guarantees access to quality providers who are committed to providing safe, quality health care to TRICARE beneficiaries at a lower cost. Health care costs could eventually decrease due to the acceptability of the fee schedule by providers versus the DHA paying billed charges in various countries. Furthermore, decreasing the number of providers should result in better oversight of health care that could eventually lead to a decline in fraud.

Philippine Demonstration Blueprint

The DHA established specific criteria to use a phased approach for launching the Philippine Demonstration in designated areas. The TOP contractor who administers the TRICARE program overseas was responsible for developing a closed network of physicians, hospitals, and other practitioners that could provide quality care to TRICARE beneficiaries (TMA, 2008a). The TOP contractor was responsible for determining the ratio of medical providers and specialties based on the population of TRICARE Standard beneficiaries (TMA, 2008a). The TOP contractor selected a limited number of providers who met the credentialing and licensing criteria imposed by Philippine law and U.S. law. The selection criteria excluded providers who were on prepayment review (TMA, 2008a).

The TRICARE medical benefit under the Philippine Demonstration did not change from the original TRICARE medical benefit (TMA, 2008a). The TOP contractor is responsible for utilization management, case management, and quality management for beneficiaries receiving care under the Philippine Demonstration (TMA, 2008a). The TOP contractor is also responsible for functioning as health care finder to assist beneficiaries in locating approved Demonstration providers (TMA, 2008a). The TRICARE Standard beneficiary is still responsible for obtaining preauthorizations for specific care as outlined in the TRICARE Policy Manual (TMA, 2008a). Although access to care standards is not part of the TRICARE Standard option, the approved Demonstration providers are required to meet TRICARE access standards for appointments. Beneficiaries seeking appointments for urgent care should be seen the same day, for routine care within 7 days, and for specialty care within 30 days (TMA, 2008a).

The reimbursement method changed for providers under the Philippine Demonstration. The change in reimbursement required providers to accept the government-directed foreign-fee schedule as payment in full to eliminate balance billing for TRICARE beneficiaries (TMA, 2008a). The approved Demonstration provider can request the TRICARE Standard beneficiary to pay their cost share and annual deductible at the time the medical services are provided. Beneficiaries who receive care in designated Demonstration areas must receive care from approved Demonstration providers or obtain a waiver to see a certified provider to avoid paying 100% of the cost for covered services (TMA, 2008a).

Implications for Positive Social Change

The Philippine Demonstration would have a major influence on health care delivery for TRICARE Standard beneficiaries residing in the Philippines and providers rendering services to those beneficiaries. The blending of the MHS and the Philippines health care system, two very distinct health care systems, would create positive social change.

The use of the foreign fee schedule reimbursement methodology using the purchasing power parity conversion factor allows the DoD to purchase the same amount and type of health care services in the Philippines of equal value. Before the Philippine Demonstration, the DoD reimbursed medical care based on the foreign-fee schedule, but the providers were not required to accept the foreign-fee schedule as payment in full. To be an approved provider under the Philippine Demonstration, the provider must agree to accept the TRICARE maximum allowable charge based on the foreign fee schedule as payment in full (TRICARE Operations Manual, 2008a). The financial burden would be decreased for the TRICARE Standard beneficiary because they would be liable only for the annual deductible, individual or family, and cost shares and balance billing would be eliminated under the Philippine Demonstration. In some instances, the beneficiary would not be burdened with having to make upfront payments before hospital admissions or high-cost outpatient services.

There should be a significant reduction in unusual claims activity. A provider who desires to become an approved Demonstration provider must not be on prepayment review, agree to accept the foreign-fee schedule, agree to file the claim on behalf of the

beneficiary, and agree to list their name in the approved Demonstration provider database (TRICARE Operations Manual, 2008a). Implementing a PPO model with approved demonstration providers limits the number of providers so that an appropriate patient to provider ratio can be obtained using a beneficiary-sizing model. When the pool of providers is small, the TOP contractor can monitor the billing activities of the providers more efficiently, decreasing or eliminating fraudulent activities.

If the government determines that it met the expected objectives, there is a possibility that this alternative method of delivering and reimbursing health care may become the health care model in other countries for all TRICARE Standard beneficiaries where accessing safe, quality care is problematic, and the government reimburses billed charges to health care providers.

Summary and Transition

This chapter presented the major constructs of the study, the RQs, and gaps in the current literature. Chapter 2 poses major themes from the relevant literature, the theoretical base of the research, and the methodology for statistical analysis. Chapter 3 provides information regarding the sample, data, independent and dependent variables, and methodology selected to explore relationships between and within variables. Chapter 4 presents the statistical analysis of data and key findings. Chapter 5 concludes with a discussion of the implications of the findings for access to high-quality care in the Philippines while containing health care costs.

Chapter 2: Literature Review

Introduction

The purpose of this literature review is to assess articles on access, quality care, and cost containment mechanisms incorporating the health system for one country (United States) with another country's health system (Philippines) to determine if an alternative method for providing medical care would be efficient and acceptable.

Search Strategy

A comprehensive search strategy was used to locate relevant articles related to access to health care, health care financing, and quality of care based on the experience of patients. Multiple databases were used to locate published studies that were conducted in the literature on health services, health care fraud, quality, political science, business, and economics for the years 1966–2015. Databases included Academic Premier, CINAHL Plus, Emerald, OVID, ProQuest, PubMed, SAGE, ScienceDirect, Thoreau, and Google Scholar. Keywords used included *access to care, quality of care, patient experience, health care fraud, managed care, CHAMPUS, TRICARE, health care reimbursement, Philippine health care,* and *patient satisfaction*. Any recent research that used patient experience, quality of care, and access to care theories to explain patient satisfaction were included. Only articles that were peer reviewed and appeared in scholarly journals were included.

Theoretical Frameworks: Access to Health Services and Quality Health Care

Andersen's behavioral model for health care laid the foundation for assessing health care access and utilization. The initial framework, behavior families' use health

services, has undergone five modifications, wherein scholars and Andersen have made modifications to fit the assessment of health care. During this period, cost containment was not an issue. Rather, the model focused on situations that enabled or obstructed the utilization of health care (Andersen, 1995). The purpose of this theoretical framework is to evaluate the effectiveness of the Philippine Demonstration's impact on health care delivery access using a PPO.

Andersen's Behavior Families' Use of Health Services

The behavior families' use health services model was developed in the 1960s to (a) determine the reason a family unit would access medical care, (b) construct a definition for equitable access as well as determine the variables to measure equitable access, and (c) incorporate the policy aspect for equitable access to care (Andersen, 1974, 1995, 2008). Andersen (1974, 1995, 2008) posited that a family's demographic and socioeconomic factors and health policy could elucidate the use of medical care. Furthermore, Andersen determined that the family unit's head of household gender, race, ethnicity, education, and beliefs about health illuminate the use of seeking care (Aday & Awe, 1997; Andersen, 1974, 1995, 2008). Health care policy, insurance, income, and availability of facilities either enable or obstruct the use of care by the family (Andersen, 1974, 2008). The family unit's environment dictates the need for medical care, for example, the location where the family lives and their health status (Aday & Awe, 1997; Andersen, 1974, 1995, 2008). Since the conception of Andersen's original model, several iterations have taken place to build upon the behavioral model improving its usefulness.

Phase 2. Andersen and Aday incorporated a health care system because of the significance of national health policy and resources and organizational structure for accessing care, and consumer satisfaction as an outcome measure for using the health system (Aday & Andersen, 1974; Aday & Awe, 1997; Andersen, 1995, 2008). Aday and Andersen (1974) acknowledged that the use of medical care falls within the scope of politics for making changes to the health care system, and according to Aday and Awe (1997), Andersen's model was the first national survey assessing access to care in the United States.

Phase 3. Andersen and Newman (1973/2005) integrated societal determinants, health systems services, individual determinants, and health services utilization in Andersen's behavioral model (see also Aday & Awe, 1997). Andersen and Newman (1973/2005) posited that individual determinants are affected by societal determinants (technology and norms) and the health services system (resources and organization). The societal determinants of this model posit that advancement in technology as well as societal norms and values have affected the use of health services (Andersen & Newman, 1973/2005). For example, the shift in surgical technology has evolved in such a way that it changed the length of hospital stays patients usually experience for complex surgeries. Advances in therapeutic medication and the location where patients receive treatment, as shown in the reduction of mortalities because of infectious disease, and the reduction of conditions requiring inpatient treatment treated on an outpatient basis are additional examples of the effects of advancements in technology. The societal norms dictate the

financing of health services, and societal values play a role in financing some health services (Andersen & Newman, 1973/2005).

Andersen and Newman's (1973/2005) health services system's components included resource and organization. The resource element included the dedicated finances for providing health care and some resources to provide the appropriate provider to patient ratio. The organization element examined the requirements for individuals to access medical care and the identification and resolution of barriers interfering with individuals accessing medical care. The cost of care in the form of out-of-pocket expenses by individuals, wait time for some specialty treatments, and the different qualifying conditions (benefits) can delay patients accessing needed medical care. Andersen and Newman believed that access to health care would increase if patient out-of-pocket expenses decreased because of public and private insurance, decreased wait times for medical care, and an increase in the number of conditions (benefits). The structure element under the organization component is the most complicated element (Andersen & Newman, 1973/2005). The structure element links to other elements for accessing care. The process for treating patients after entering the health system includes evaluating the type of provider first administering care, required ancillary services, referrals for specialty care, and necessary hospital admissions.

The individual predisposing factor includes sociodemographic factors, whereas structure (age, gender, past illnesses), social structure (education, cultural factors, religion), and beliefs (values regarding health, attitudes toward obtaining medical care, and knowledge of different diseases) dictate the propensity for accessing care (Andersen

& Newman, 1973/2005). The individual enabling factor includes family (income, health insurance coverage, accessibility of care) and community (provider [individual and facility] to patient ratio, the cost of care, and place of care) components that might affect utilization of medical care (Andersen & Newman, 1973/2005). The illness level perceived (disability days away from work or school, symptoms of the individual, health status of fair, good, or excellent reported by the individual) and evaluated (diagnoses of illness caused by symptoms) determined the need for medical care (Andersen & Newman, 1973/2005). According to Andersen and Newman, individual determinants, predisposing, enabling, and illness level, are important in determining utilization patterns. The illness level component (perceived and evaluated) under the individual determinant ranked the highest for the relative importance of use (Andersen & Newman, 1973/2005).

Andersen and Newman (1973/2005) emphasized the health services use component. The significant factors under the health services use component are type, purpose, and unit of analysis. The type of health services use is affected by societal determinants for various providers (individual, facility, and dental) of care. The purpose of care is broken out into categories of primary care (prevention of illness), secondary care (treatment of illness), tertiary care (stabilization of chronic conditions), and custodial care (provides personal needs only). The unit of analysis accounts for contact (initial contact or number of services during a period of time), volume (number of time patient accesses medical care and type of provider), and episodic care (specific diagnoses) for the use of health services (Andersen & Newman, 1973/2005).

Andersen (1995) included consumer satisfaction with health status based on the perspectives of the population and providers as a measurement of health outcomes. According to Andersen, effective access had been achieved when the population's health status or satisfaction with the health care provided improved. Additionally, efficient access is based on health status and increased satisfaction about the consumption of health care measures relevant to health policy and reform (Andersen, 1995).

Phase 4. The fourth iteration of the behavioral model of health services use was modified to show several factors for use of health services and health status (Andersen, 1995). This model indicates that future predisposing, enabling, and need characteristics have the propensity to be affected by outcomes (Andersen, 1995).

Phase 5. Modernization of Andersen's current model, the behavioral model of health services use, incorporated the reasons for the population using medical care through contextual characteristics and individual characteristics. The components of this model's framework consist of contextual characteristics, individual characteristics, health behaviors, and outcomes (Andersen, Davidson, & Baumeister, 2010). This model examined contextual characteristics to determine (a) the illnesses that caused the community to access care, (b) the factors that enabled or obstructed the community's access to care, and (c) the circumstances that were noticeable by the patient or provider that medical care was needed.

Contextual characteristics. The contextual predisposing characteristics identified the conditions under which care was accessed as demographics, social status, and beliefs (Andersen et al., 2010). The contextual enabling characteristics are health

policies, financial resources, and organization structure in the community. Health policies at the federal, state, and local levels can affect access to health services. The impact of federal health policies and international health policies affected access to health services and the quality of health care for TRICARE Standard beneficiaries in the Philippines. Financial resources available for purchasing health care, cost of care, method of reimbursing providers, and health insurance coverage were measured. The structure of the organization consisted of the number of facilities and providers, a mix of providers to include the types of services in the community, use management, quality assessment, and mechanisms for educating purchasers and providers of health care (Andersen et al., 2010). The contextual need characteristics included measurements of the population health indicators that are linked to the community but not necessarily linked to the environment (Andersen et al., 2010). The rate of mortality, morbidity, and disability conditions are measurements of population health.

Individual characteristics. The individual predisposing characteristics are demographic, social status, and health beliefs (Andersen et al., 2010). The individual's age and gender play a part in the propensity for accessing health services. The social status of the individual, such as level of education, cultural background, and type of work, can enable or obstruct individuals' access to health services. The values, beliefs, and experiences of individuals with health services can affect their future health services use.

The mutability of enabling determinants for the family and community factors is high, whereas the mutability of predisposing determinants for sociodemographics is low,

and beliefs are medium (Andersen & Newman, 1973/2005). The distribution of health services is affected by specific factors that can undergo change. Decision makers, health care administrators, and political leaders can use health care policy to improve access, use, and quality.

Andersen's (1995) behavioral model of health services is a prominent model used by researchers to assess access to care (Ricketts & Goldsmith, 2005). Andersen's behavioral model, initially conceptualized in 1960, focused on policy development for access to care, reasons associated with families' consumption of medical care, and on clarifying and evaluating access to care. Throughout the years, Andersen's behavioral model underwent several iterations. Other scholars perfected the second phase of Andersen's model in the 1970s, introducing the health care system and national health policy and consumer satisfaction and use as important indicators for measuring access to care. Andersen perfected the third phase of the behavioral model, focusing on individuals, measures for effective access as shown by improved health status and improved beneficiary satisfaction, and efficient access based on health status and increased satisfaction in relation to the consumption of health care measures, which are important for health policy and reform. Karikari-Martin (2011) asserted there is no consistency between the different theoretical frameworks for measuring access. Karikari-Martin examined Penchansky's model, which measured availability, accessibility, accommodation, affordability, and acceptability, whereas the Institute of Medicine model measured access impediments, use of services, and use of mediators, and the behavioral model of health measured the influence of community-level and individual-level

characteristics on access. Andersen's behavioral model of health services was best suited for this research.

Donabedian's Quality of Health Care

Donabedian (1980, 2003) pointed out that before assessing the quality of care, there must be a shared understanding of what constitutes quality. Donabedian found defining quality in health care to be challenging but necessary. Donabedian divided quality in health care into two distinct elements: (a) technical management, which is science and technology, and (b) interpersonal management, which is the application of science and technology. Donabedian (1980) added amenities as the third element of quality in health care, which could be an aspect connected to interpersonal management. The innovation of science and technology coupled with health professionals using the knowledge derived from science and technology to take care of patients produces attributes of quality in health care.

The attributes of quality in health care are efficacy, effectiveness, efficiency, optimality, acceptability, legitimacy, and equity (Donabedian 1980, 2003). Quality in health care can be defined "as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Institute of Medicine, 1990, p. 44).

Structure, process, and outcome. Donabedian explained health care quality through the concept of structure, process, and outcome. Donabedian's (1980, 2003) quality theory uses structure, process, and outcome to assess the quality of care. Donabedian (2003) made it clear that "structure, process, and outcome are not attributes

of quality" but are three approaches used to presume "whether quality is good or not" (p. 47). According to Donabedian (1980, 1988, 2003), a functional relationship must exist between structure, process, and outcome to make any presumptions regarding quality.

Structure depicted a place of health care delivery, human resources, reimbursement methodology, and instrumentality to perform health services. Process depicted the actions of patients to access health care and the actions of health professionals to provide health care. Outcome depicted "the effects of care on the health status of patients and populations" (Donabedian, 1988, p. 1745). Donabedian's (1980, 1988, 2003) quality model shows the importance of the existence of a functional relationship between structure and process as well as process and outcome to evaluate the quality of health care.

Health Care in the United States

The U.S. health care system is a complex, mixed system with public- and private-sector health schemes. The public sector scheme is composed of health systems that are managed by the government. The Bismarck model, a social insurance system, created in 1883, and the Beveridge model, a universal system, formed in 1946, are the basis for Medicare, a federal program established in 1965 (Kovner & Knickman, 2011). Employees and employers contribute to Medicare. Medicare was created to provide medical care to individuals who turned 65 and individuals with disabilities regardless of age. The Balanced Budget Act, amended in 1967, created Medicaid and the Children's Health Insurance Program, extending access to care for children whose parents did not have the means to buy care in the private sector (Longest, 2006). The federal and state

governments fund Medicaid. The U.S. Veterans Health Administration and DoD health systems are based on the Beveridge model and are funded by taxes, copayments, and cost shares from eligible beneficiaries.

Health expenditure 2011. The United States is classified as a high-income country with a population of 316,094,000 (World Population Statistics, 2013). Expenditures for medical care in the United States are constantly rising in the public and private sectors. In 2010, the United States paid $2.7 trillion for health care, and the total national health expenditure capped at 17.9% of the gross domestic product from 2009 through 2011, with a spending growth rate of 3.9% (Centers for Medicare and Medicaid Services, 2013). The cost of health care will outgrow the gross domestic product, and if not contained, health care costs will use up a significant portion of the gross domestic product; therefore, it is prudent to take measures to contain health care costs. The contributors to financing health care for 2011 were households at 28%, the federal government at 28%, private business at 21%, state and local government at 17%, and other private revenue at 7% (Centers for Medicare and Medicaid Services, 2013).

Regulating health care. Regulatory practices in health care are geared toward access to care, quality care, and cost containment (Field, 2007). The Hill–Burton Act of 1946 allowed the construction of hospitals and expansion of hospitals to reduce the geographical impediments that created barriers to accessing care (Field, 2007). In 1956, CHAMPUS was established under the Dependent Medical Care Act to provide care to service members' families (Longest, 2006). The Comprehensive Health Planning and Services Act of 1966 was amended in 1974, establishing national Health Systems

Agencies to regulate building or expansion of medical facilities at the state level. This act mandated states to start a certificate-of-need program in which hospitals identified medical and technological requirements in their health plans (Field, 2007). The Balanced Budget Act of 1997 established many requirements under Medicare, such as revising the reimbursement system, reducing payments for inpatient and outpatient services, as well as expanding care to children for families who could not afford to purchase medical care (Field, 2007; Longest, 2006).

The Health Maintenance Organization Act of 1973 mandated that health maintenance organization options be included in the selection of health insurance provided by employers (Field, 2007). Established in 1951, the Joint Commission on Accreditation of Healthcare Organization, accredits hospitals, ensuring hospitals comply with established quality stands (Field, 2007). In 1990, the National Committee for Quality Assurance was created to provide oversight of quality for managed care organizations in the private sector.

The Federal Anti-Kickback laws were implemented in 1972 to deter individuals from receiving financial inducements for referrals or purchasing of goods and services reimbursed under a federal health care program (Matyas & Valiant, 2006). Title 32 Code of Federal Regulations Section 199 regulates CHAMPUS/TRICARE programs, providing guidance on benefits, claims processing, accreditation, and fraud, among other aspects of purchasing direct care (Matyas & Valiant, 2006; TMA, 2008a). The Federal Appropriations Act of 1993 stipulated that CHAMPUS beneficiaries cannot be billed 115% over the CHAMPUS allowed charge (TMA, 2008c). The Balanced Budget Act of

1997 afforded the same balance billing protection for Medicare beneficiaries (Field, 2007). The balance billing protection law only applies in the United States.

Health Care in the Philippines

The Republic of the Philippines is a low middle-income country with a population of 98,007,000 as of August 2013 (Population Reference Bureau, 2014). The Philippines health system is a decentralized National Health Plan model in which the Philippine Health Insurance Corporation (PhilHealth) administers the public sector health benefit and collects the payments, whereas the Department of Health, Philippines oversees health care policies (Boslaugh, 2013). Many Philippine citizens do not understand the benefits administered by PhilHealth (Boslaugh, 2013).

Health expenditure 2011. In 2011, the Philippines' total health expenditure was PhP431 billion (National Statistical Coordination Board, 2013). Funded by various sources, the amount of funding from each contributor were PhP116,433 billion from the government, PhP39,126 billion from social insurance, PhP272,009 billion from private sources, and PhP3,478 billion from grants (National Statistical Coordination Board, 2013). Therefore, private sources spent 63.1% on health care; the government spent 27% on health care, social insurance contributed 9.1% to the cost of health care, and grants contributed 0.8% to the cost of health care (National Statistical Coordination Board, 2013).

Selected Republic Acts. The Philippines health system underwent major changes to adopt regulations to provide access to quality medical care by implementing various Republic Acts (Republic of the Philippines Department of Health [PDH], n.d.). The

Hospital Licensure Act of 1965 was implemented to ensure that every hospital has a license to operate (PDH, n.d.). The Medicare Act of 1969 was superseded by the National Health Insurance Act of 1995, expanding access to care to citizens of the Philippines, specifically, the impoverished (PDH, n.d.). The Pharmacy Act of 1987 governs the sale of medicines in the Philippines (PDH, n.d.). The purpose of the 1999 Health Sector Reform Agenda was to improve the facets of the Philippine health system at different levels (PDH, n.d.). The Universally Accessible Cheaper and Quality Medicines Act, implemented in 2008, keeps quality medicines at an affordable price for everyone (PDH, n.d.).

Cost Containment

Several mechanisms have been implemented to reduce health care expenditures. These mechanisms to contain rising costs in health care differ between the public sector and private sector. In the public sector, under the Medicare program, the prospective payment system (PPS) and the resource-based relative value system (RBRVS) are used to control costs. The PPS controls rising costs for hospitals by establishing reimbursement rates based on the patient's diagnosis, whereas the RBRVS controls physicians' reimbursement rates based on the level of expertise needed to treat a condition. Under the Medicaid program, states have opted to determine the benefits provided to beneficiaries who are eligible for the program as well as regulate reimbursement rates to providers. As a cost containment measure, managed care was implemented to contain rising medical costs (Mohaghegh, 2007; Rodwin, 2010; Weiner, Famadas, Waters, & Gikic, 2008; Zwanziger, Hart, Kravitz, & Sloss, 2001).

Managed care organizations. Cost containment, access to care, and quality care are concerns in the health industry (Mohaghegh, 2007). The development of managed care was originally intended to control the rising cost of health care in the United States (Mohaghegh, 2007; Rodwin, 2010; Weiner et al., 2008; Zwanziger et al., 2001). However, Koop (1996) clarified that access to care was the catalyst for managed care, not cost containment. Koop believed that physicians wanted the latitude to provide care to their patients without concern if the patients could afford to pay for the medical services. After the implementation of managed care, the focus was placed on medical practices and disease management that produced better outcomes and utilization management that eliminated medical procedures the patients did not need (Koop, 1996). In essence, cost containment was an outcome of managed care.

The rising cost of health care, access to health services, and quality care were not only concerns in the United States but also concerns in other countries (Weiner et al., 2008). According to Schoen et al. (2010), the design of the insurance plan influences access to medical care and costs in the United States and internationally. Vargas, Vázquez, Mogollón-Pérez, and Unger (2010) also found that insurance design impacts access to medical care. Patients were required to pay user fees, creating barriers to care, affecting access to much-needed medical care. Other countries were evaluating ways to contain their health care costs and provide oversight of medical services, so the concept of managed care in the United States was exported to other countries (Rodwin, 2010; Weiner et al., 2008). Some countries had difficulty with managed care, for example, the

first time the Philippines tried to implement managed care, managed care techniques were not successful until later.

Schoen et al. (2010) conducted a computer-assisted telephone interview survey March through June 2010 by the Commonwealth Fund to explore the differences in healthcare access, cost, and care experiences based on income with different cost sharing provisions in 11 countries including the United States. Schoen et al. found that providers were reimbursed the same regardless of the beneficiary's income in all countries except the United States. In fact, Schoen et al. found that insured adults in the United States in comparison to the other countries were more than likely to forgo medical care because of cost, financial difficulty paying for medical care, problems with their insurance company, and although insured, still have medical expenses.

Rodwin (2010) noted physicians provided a high amount of medical services under the fee-for-service (FFS) payment system; however, capitation was implemented to pay for each patient, which ended entrepreneurship and fee-for-payment conflicts. Scholars believed that health care reimbursement differed based on the country; whereas some countries use a FFS system, capitation, and a PPS (Rodwin, 2010; Weiner et al., 2008), Kwon (2011) found that some Asian countries with universal health care use an FFS reimbursement system effectively for reimbursing providers, and other Asian countries that use FFS reimbursement systems should use a different reimbursement system for effectiveness.

The government may finance the health care system as seen in New Zealand, but in Singapore, the bulk of health care expenditure is privatized (Weiner et al., 2008).

Wagner et al. (2011) recommended passing public policy in which individuals could have access to medical care without jeopardizing their quality of life. In various countries, individuals have been forced to choose between receiving medical care and paying for household goods, such as rent or food (Wagner et al., 2011).

Understanding the difference in managed care organizations (MCO) is important, especially when medical care is delivered through an MCO instead of the traditional insurance plan (Wagner & Kongstvedt, 2007). Each type of MCO has specific rules beneficiaries must follow.

Health maintenance organizations. Beneficiaries must enroll in HMOs, whereby they will be assigned a primary care manager who will coordinate their medical care. HMOs could be reimbursed using a sliding scale, fixed fee schedule, or diagnosis-related groups (Wagner & Kongstvedt, 2007). HMOs must ensure beneficiaries have access to high-quality care. Cost containment mechanisms, such as utilization management, case management, and disease management, are part of the services provided in an HMO plan. There are staff model HMOs, group model HMOs, and independent practice model HMOs with varying differences.

Preferred provider organizations. PPOs contract with providers to provide medical services to beneficiaries. PPOs have a negotiated rate that includes a fixed fee schedule, all-inclusive per diem rates, or diagnosis-related groups (Wagner & Kongstvedt, 2007). The size of the PPO may be limited. Beneficiaries covered under PPOs can use non-PPO providers, but coinsurance rates, such as copayments, will be

higher, as will deductibles (Wagner & Kongstvedt, 2007). As a cost containment mechanism, utilization management programs are in place to contain cost.

Point of service. Wagner and Kongstvedt (2007) thought of the POS model as a hybrid of the HMO and PPO models. Under the PPO model, the provider would be reimbursed using a capitation method or performance-based method. The HMO model would allow the beneficiary to seek care outside the HMO network, but the beneficiary would be responsible for a higher deductible and coinsurance.

MCOs utilized cost constraint mechanisms, such as disease management, case management, utilization management, and financial incentives, to contain costs (Granger, Boyer, Weiss, Linton, & Williams, 2010; Mohaghegh, 2007).

Heath Care Fraud

Fraud contributes to the escalation of health costs. Sutherland (1940) described fraud as "white-collar criminality" that is present in various businesses and different professions. Health care is a lucrative industry making health systems around the world appetizing to white-collar criminals. Savedoff and Hussmann (2005) estimated that $3 trillion or more is spent on health care globally, which makes the health care industry more susceptible to fraud and abuse.

The Philippines is known for the widespread health care fraud and abuse activities that contributed to the increased health care expenditures. In response to the fraudulent and abusive activities, the DHA implemented fraud and cost control initiatives in the hope of controlling health care costs and eliminating fraudulent billing practices in the Philippines. These initiatives included the following:

1. Provider validation and certification: In the Philippines, the DHA identified a significant number of claims submitted by providers who did not exist. The DHA implemented a requirement that DHA must certify all Philippine providers who serve TRICARE beneficiaries. The TOP contractor is responsible for verifying that providers meet the Philippine government's and its licensing board's established standards for credentialing and licensing. The providers must also meet some of the U.S. standards. The certification process requires on-site verification of the providers' offices and inpatient facilities to ensure they exist and are capable of providing the specified level of care billed.
2. National drug coding (NDC): DHA required providers who exceeded the $3,000 limit for pharmacy services in a year to submit pharmacy charges with the NDC.
3. Prepayment review: As one of the most effective antifraud controls, the TOP contractors reviewed claims before paying claims.
4. Government-directed foreign fee schedule: In November 2008, DHA implemented the use of the purchasing power parity indexed fee schedule in the Philippines. Using the country-specific index for the Philippines reflects the actual medical costs for services rendered. The foreign-fee schedule controls costs and reduces fraud and abuse.
5. Education: The identification of inappropriate behaviors for providers and beneficiaries who submit claims results in educational letters sent to the

providers and beneficiaries explaining the inappropriate behaviors and the consequences of the behavior.

6. Data mining tools: Data mining provides TRICARE with the technology to transform complex and voluminous health care transactions into useful information to detect fraud and abuse.
7. Payments and explanation of benefits mailed to providers versus billing agents: In the Philippines, third-party agencies (TPA) submitted inflated claims to TRICARE unbeknownst to the providers as the payments went directly to the TPAs. As a result, TRICARE only allows for payments and explanations of benefits mailed to the providers at the location identified on the claims, not to the TPAs.
8. Supporting documentation: In November 2008, the DHA allowed providers and beneficiaries to fax claims and supporting documentation to the TOP claims processor.
9. TRICARE certified pharmacies: Providers filled prescription medications in their offices and billed TRICARE for an office visit. DHA implemented certification requirements for pharmacies in the Philippines, whereas prescription medications from certified retail or hospital-based pharmacies may be cost shared.
10. Proof of payment: In September 2012, DHA implemented a proof of payment requirement for all health care received overseas and paid for by the beneficiary (Carey, 2011; Scott, 2006; TMA, 2008a).

Department of Defense Health System

The DoD has the oldest, largest medical system, dating back to 1799, when Congress enacted legislation to care for disabled seamen and, in 1884, extending the health care entitlement to family members at no cost (Granger et al., 2010). Active-duty family members could obtain care in the civilian sector after the Emergency Maternal and Infant Care Program was passed in 1943 and the Dependents Medical Care Act was passed in 1956, giving DoD the authority to enter into contracts with nonmilitary providers (Barton, 2007; Coppola, Harrison, Kerr, & Erckenbrack, 2007; Granger et al., 2010). Retirees and their family members could obtain medical care in the civilian sector after the Military Medical Benefits Amendment was passed in 1966 (Granger et al., 2010). As a result, in 1967, CHAMPUS was formed providing a mechanism for non-active-duty beneficiaries to receive care in the civilian sector (Granger et al., 2010).

Approximately 500 military installations closed between 1988 and 2005 under the Base Realignment and Closures Act, decreasing access to care in military treatment facilities (MTF) for retirees and their family members as an effort to decrease rising medical expenditures in the MTF (Coppola et al., 2007; Granger et al., 2010). The need to purchase medical care in the civilian sector doubled health care expenditures, leaving DoD to examine other ways to deliver medical care to this population. Medical care expenditures were still out of control, so DoD conducted the CHAMPUS Reform Initiative (CRI) from 1988 to 1993, to provide medical care using a managed care model that mirrored managed care in the private sector. The CRI managed care model offered three optional plans for beneficiaries: the CHAMPUS Prime option, which resembled a

health maintenance organization; CHAMPUS Standard, the original basic FFS option; and CHAMPUS Extra, a hybrid of the private sector preferred provider option (Granger et al., 2010; Zwanziger et al., 2001). This initiative was the beginning of the transformation of CHAMPUS to TRICARE.

Military Health System

The MHS is responsible for providing health care to 9.7 million service members, retirees, eligible family members, National Guard and Reserve members, and former spouses all over the world (TMA, 2012). The MHS is a combination of direct care, care received in MTFs, and purchased care, or care received in the civilian sector (Granger et al., 2010; TMA, 2012).

The MHS mission is "to enhance the Department of Defense and our nation's security by providing health support for the full range of military operations and sustaining the health of all those entrusted to our care" (TRICARE, 2012, para. 3). The vision of the MHS is "a world-class health care system that supports the military mission by fostering, protecting, sustaining, and restoring health" (para. 4).

TRICARE Health Plan Options

TRICARE Prime is DoD's health maintenance organization–like option. TRICARE beneficiaries must take action to utilize this option. Beneficiaries desiring to use TRICARE Prime must enroll by completing an enrollment application and selecting a primary care manager. Through enrollment in TRICARE Prime, beneficiaries will receive medical care in MTFs or the private sector (TMA, 2009). Depending on the beneficiary category, there will be no cost or reduced out-of-pocket cost (TMA, 2008c).

Active-duty family members enrolled in Prime are not subjected to an enrollment fee and copayments, whereas retirees and their family members enrolled in TRICARE Prime will be subjected to an enrollment fee and copayments (TMA, 2008c). Copayments are only applicable when retirees and their family members receive care in the private sector (TMA, 2008c). Beneficiaries enrolled in TRICARE Prime must follow the rules of TRICARE Prime, for example, a beneficiary cannot self-refer to a specialist without obtaining a referral from the assigned PCM and authorization provided by the contractor for the region in which the beneficiary is enrolled. If beneficiaries receive care without the proper referral and authorizations, they are encouraged to use their point of service option. The TRICARE Prime option is not available worldwide (TMA, 2009).

TRICARE Standard is the basic FFS option in which CHAMPUS laid the foundation for the benefits currently provided with enhancements (Granger et al., 2010; TMA, 2009). The TRICARE Standard option allows the most freedom to select providers but costs more money. The beneficiaries will be responsible for deductible and cost shares based on beneficiary category (TMA, 2008c). There is no enrollment, and generally, referrals and authorizations are not required with a few exceptions, for example, inpatient treatment, skilled nursing care (TMA, 2008a, 2008b). Beneficiaries must receive care from TRICARE-authorized providers for TRICARE to reimburse on their claims. According to the balance billing law, providers cannot balance bill TRICARE Standard beneficiaries more than 15% above the TRICARE maximum allowable amount; the balance billing limitation is only applicable in the United States (TMA, 2008c). TRICARE Standard is available all over the world.

TRICARE Extra is the preferred provider option in which TRICARE beneficiaries use providers in the TRICARE network. Beneficiaries do not enroll in this option; they are TRICARE Standard beneficiaries opting to see network providers on a case-by-case basis in which they receive a 5 percent discount (TMA, 2008b, 2008c, 2009). Providers cannot balance bill the beneficiaries because they are network providers who have signed contracts agreeing to accept what TRICARE allows in full (TMA, 2008b, 2008c). TRICARE Extra is only available in the United States (TMA, 2008b).

Evolution of the Military Health System

According to Granger et al. (2010), the DoD MHS is the oldest and largest health care system, dating back to 1799, when Congress enacted legislation to care for disabled seamen. In 1884, Congress extended the health care entitlement to family members at no cost. The Emergency Maternal and Infant Care Program was passed in 1943, giving active-duty family members the opportunity to obtain care in the civilian sector (Granger et al., 2010). After the Dependents Medical Care Act was passed in 1956, DoD had the authority to enter into contracts with nonmilitary providers (Granger et al., 2010). Active-duty family members were given priority over retirees and their family members in MTFs, resulting in a shortfall of appointments. As a result, the Military Medical Benefits Amendment had passed in 1966, allowing retirees and their family members to obtain medical care in the civilian sector (Granger et al., 2010).

Military Health Care Demonstration: CHAMPUS Reform Initiative

The health system for the military faced the same problems as other health care systems throughout the United States and internationally. Thus the evolution for

CHAMPUS to incorporate TRICARE as an enhancement to the MHS started in 1988 with the CRI. The CRI was designed to decrease the costs of purchased care and direct care, reduce the utilization of health care in the private sector, improve coordination of care between the MTFs and civilian providers, and increase patient satisfaction (Zwanziger et al., 2001). The DoD conducted the CRI 5-year Demonstration Project in Hawaii and California (Zwanziger et al., 2001).

The sample frame consisted of randomly selected active-duty members and retirees, stratified (Zwanziger et al., 2001). Eligible beneficiaries had the option to select CHAMPUS Prime, the HMO-like option, the CHAMPUS option, the original FFS basic program, or CHAMPUS Extra (Zwanziger et al., 2001). Secondary data, data from two CHAMPUS beneficiary surveys and claims data for beneficiaries surveyed, were used to evaluate cost, utilization, and patient satisfaction (Zwanziger et al., 2001). A multivariate analysis was employed to evaluate overall cost, and multivariate regression models were used to evaluate continuous (linear) and categorical (logistic) variables (Zwanziger et al., 2001).

It was concluded that the CRI Demonstration was successful; although the cost of health care increased, beneficiary satisfaction and access to care in the MTF also increased (Zwanziger et al., 2001). The research could not determine if CRI impacted quality.

Enhancements in TRICARE 1999 Through 2011

The DoD health care program provided services for approximately 8.3 million beneficiaries in 1999 (TMA, 1999). In 1999, beneficiaries enrolled in TRICARE Prime

were automatically reenrolled; action was taken only if they did not want to reenroll (TMA, 1999). Prime enrollees were no longer subjected to balance billing; thus, reducing out-of-pocket expenses for enrollees. TRICARE beneficiaries no longer paid multiple copayments for ancillary services. TRICARE aligned provider reimbursements with Medicare reimbursement rates (TMA, 1999). During 1999, active-duty service members geographically separated from units with MTFs were deemed TRICARE Prime Remote so they could receive care in the private sector close to where they worked. In 1998, six TRICARE Senior Prime Demonstration sites were launched to provide care for seniors over 65 (TMA, 2000).

Enhancements in 2000

The DoD health care program provided services for approximately 8.2 million beneficiaries in 2000 (TMA, 2000). Several demonstrations were established to provide access to care for seniors who had served their country. The Federal Employee Health Benefits Program, a 2-year Demonstration, January 2000 through December 2002, TRICARE Senior Supplement, a 2-year Demonstration, April 2000 through December 2002, Pharmacy Redesign Pilot Program network retail and mail order pharmacy, but beneficiary must have Medicare Part B (TMA, 2000). The Base Realignment and Closures resulted in limited access to MTFs that affected retirees. Beneficiaries enrolled in TRICARE Prime were assigned primary care managers by name. Case managers were assigned to care for complex cases (TMA, 2000).

Enhancements in 2001

In 2001, the DoD health care program provided services for greater than 8 million beneficiaries (TMA, 2001). TRICARE Prime Remote for Active Duty was extended to the family members living with the service members stationed at geographically separated units (TMA, 2001). The TRICARE Dental Program for family members and the TRICARE Selected Reserve Dental Program provided enhanced benefits. TRICARE for Life reinstated TRICARE benefits for retirees age 65 as long as they had purchased Medicare Part B (TMA, 2001). As of 2001, active-duty family members enrolled in Prime did not have to pay copayments (TMA, 2001). In select MTFs, active-duty service members could receive chiropractic care. The catastrophic cap for retirees was reduced to $3,000, the initiation of a nutritional program, Women, Infant, and Children Overseas, was put in place, and the Pharmacy Data Transaction Service started to improve patient safety (TMA, 2001).

Enhancements in 2007

Military medicine had to change from treating members during peacetime to treating members during wartime. Military members are indoctrinated to fight wars, so they must be indoctrinated back into the civilian sector once their tour of duty is over. Military providers and civilian providers had to be equipped to treat posttraumatic stress disorder (PTSD), traumatic brain injuries, and amputees capable of returning to work (TMA, 2012).

Enhancements in 2011

Fast forwarding to 2011, the implementation of the TRICARE Young Adult (TYA) benefit was in response to the Patient Protection and Affordable Care Act of 2010 that required private medical insurance companies to allow parents to provide medical coverage for their children up to age 26 (TMA, 2012). TRICARE benefits typically covered children up to age 21 or age 23 if in college full-time or older if disabled (TMA, 2009). The beneficiary has the option under TYA to enroll in TRICARE Prime or use TRICARE Standard, but the beneficiary must pay a premium (TMA, 2012). The contract for the TRICARE Dental Program was awarded to a different contractor resulting in lower premiums for all beneficiaries and allowing those beneficiaries and survivors not previously enrolled to enroll (TMA, 2012). Generic pharmacy drugs copayment reduced to zero in October 2011 through the TRICARE Pharmacy Home Delivery. The enhancements listed above are not all-inclusive.

Assessment of Patient Satisfaction

Evaluations must be conducted to determine if policy enhancements or demonstrations achieved the expected outcome. One way to determine if the expected outcome has been achieved is by conducting a satisfaction survey. Patient satisfaction is an important dimension for measuring access, quality, and cost. Studies have been conducted to evaluate patients' satisfaction with the type of plan option selected, like the survey assessing patient satisfaction with services provided by the primary care clinics that participated in the primary community care network (PCCN) Demonstration Project in Taiwan (Lin, Lin, & Lin, 2010).

This survey also evaluated patient satisfaction for patients receiving care from non-PCCN clinics. Lin et al. (2010) found that there was no difference in patient satisfaction among PCCN member patients and non-PCCN patients for the care quality measures. The survey also indicated that PCCN member patients would recommend the use of the PCCN clinics to others, unlike the nonmember patients, because of their satisfaction with the quality of their relationship with the doctor (Lin et al., 2010). Lin et al. also found that PCCN providers who had trusting relationships with their patients could recruit patients to become members of the PCCN.

Lin et al. (2010) and Calnan and Rowe (2006) believed that trust relations in health care between patients and providers were important. The survey depicted that the responsibility for erosion of trust between patient and provider was the health care provider. Calnan and Rowe conceded that the concept of trust correlates with patient satisfaction.

Owusu-Frimpong et al. (2010), in their study, focused on public and private health care users in the United Kingdom: The patients in the public health care sector were not satisfied with the relationship or attention they received from their providers. Friesnor, Neufelder, Raisor, and Bozman (2008) found that business processes modeled after the concept of continuous process improvement could be implemented by health care organizations to increase the satisfaction of patients who are already satisfied by evaluating patient concerns other than medical, for example, assessing registration processes and parking facilities. Owusu-Frimpong et al. (2010) used a mixed method, qualitative (semistructured face-to-face interviews) and quantitative (cross-sectional

survey, 5-point Likert scale) methodology to evaluate patient satisfaction with access to care. Owusu-Frimbong et al. employed an analysis of variance (ANOVA) to explore and compare the respondents' perceptions of access to care to their experience with access to care. The Pearson chi-square statistics and associated *p*-values were used to establish the extent of correlations between overall patient satisfaction and the patients' demographics (Owusu-Frimpong et al., 2010).

Price et al. (2014) conducted a review of the literature on "the associations between patient experience measures and other indicators of health care quality" (p. 525) to determine the logical connection between patient experiences and measures of structure, process, and outcomes. In total, 422 articles were searched, but 34 articles, from 1992 to 2013, were reviewed and used for this research. The articles reviewed methodologies that evaluated the linkage between "patient-reported experiences and processes and outcomes of care" as well as "articles reporting on CAHPS surveys" (Price et al., 2014, p. 525).

The literature review found a link between positive patient care experiences and patient adherence to treatment and influenced adherence to the treatment process for clinical outcomes for inpatient settings. It was also determined that there is a correlation between positive patient experiences and better hospital patient safety culture, and lower unnecessary health care utilization (Price et al., 2014). Measuring the experience of patients in patient-centeredness care environments is important as it increases accountability and quality improvements based on reported patient experiences.

Russell, Johnson, and White (2015) conducted a case study from July 1, 2011, through June 30, 2012, using patient satisfaction data from Portage Health in the western Upper Peninsula of Michigan. The multifacility health care system Portage Health comprises "a 36-bed acute care hospital, several family practices, numerous specialty medical practices and multiple hospital-owned clinics; including a university center and express care clinics" (Russell et al., 2015, p. 1162). Press Ganey administered a 35-question survey using a 5-point Likert scale that evaluated five areas of quality:

1. access (a1–a7), including helpfulness, promptness, courtesy, convenience, ease of reaching the clinic by phone, and ease of scheduling appointments
2. moving through the visit (v1–v7), including speed of registration; wait times in waiting room, in exam room, and at clinic; information about delays; and comfort and pleasantness of waiting room and exam room
3. nurse/assistant (n1–n2), including friendliness, courtesy, and the concern of the nurse/assistant
4. care provider (cp1–cp10), including friendliness, courtesy, and concern of care provider; explanations, information, instructions, and clear language; time with patient; and patient confidence
5. personal issues (i1–i6), including cleanliness, safety, security, privacy, sensitivity to patient needs, and pain control (Russell et al., 2014, p. 1162).

The survey was mailed to 6,824 patients after an encounter; 1, 514 patients responded, in which 129 patients submitted surveys with 10 or more questions unanswered, so 1,385 surveys were considered usable. Some of the remaining surveys

had missing data for demographics which were not corrected, and the other missing data were corrected with average responses (Russell et al., 2014). Press Ganey used the statistical package SAS/JMP to run the regression models for the overall measures of patient satisfaction. "ANOVA F-tests and the coefficient of determination were used to test the significance of the models" (Russell et al., 2014, p. 1166). The dependent and independent variables, except the demographic variables, were measured using the 5-point Likert scales. Four questions (independent variables) were included under the Overall Assessment section of the survey: "overall cheerfulness of our practice (o1), how well the staff worked together to care for you (o2), overall rating of care you received during the visit (o3) and likelihood of you recommending our practice to others (o4)" (Russell, Johnson, & White, 2015, p. 1164). The other overall assessments were considered as dependent variables, except for "overall cheerfulness of our practice" (Russell et al., 2015, p. 1164).

Russell et al. (2015) determined that variables for access, moving through the visit, nurse/assistant, care provider, and personal issues did have an impact on overall assessments of care quality. It was determined that gender and type of care provider did not have an impact on overall patient satisfaction. It was noted that older patients, 55 years or older, responded to the mail surveys. The demographics of the nonrespondents are unknown. Therefore, Russell et al. recommended using different methodologies for surveys.

A study was conducted to assess access to care and medicines and household economic burdens (Wagner et al., 2011). Wagner et al. stated, "Each year, an estimated

44 million households suffer severe financial hardship and 25 million are pushed into poverty because they need to pay for health care" (p. 151). Individuals use their savings, decrease the monies spent on food, and sell their assets to pay for health care, or they may opt not to receive the needed health care (Wagner et al., 2011). This study was conducted across 70 countries with varying degrees of income—22 low, 18 lower middle, 10 upper middle, and 20 high income—using the criteria established by the World Bank in 2003 (Wagner et al., 2011). Better access to acute care and chronic care decreased the possibility of catastrophic health care expenditures.

This particular study revealed that although most insurance companies covered inpatient services and outpatient physician services, they did not cover the medications prescribed during those episodes of care. The study also highlighted the correlation between access and health care costs financial challenges. Assessment of patient satisfaction will result in process improvement (Owusu-Frimpong et al., 2010), change in public policy (Wagner et al., 2011), and other patient concerns among other improvements (Friesner, 2009).

Alkhwaldeh et al. (2014) argued that in developing countries people were living longer. Alkhwaldeh et al. conducted a cross-sectional study to evaluate the utilization patterns for primary health care factors and predictors of utilization and nonutilization of health care for older adults Jordan within the past 1,6, and 12 months. The sample frame consisted of 190 participants age 50 and older, 79 participants in the South, 85 participants in the center, and 26 participants in the North, in the Irbid governorate of Jordan (Alkhwaldeh et al., 2014).

Alkhwaldeh et al. (2014) used Andersen's behavioral use model to assess the predisposing, enabling, and need factors to determine the patterns associated with the utilization of primary health care services. The dependent variables were primary health care service utilization in the past 1, 6, and 12 months. The research question was "Did you visit the primary health care center in your region during the past month? Past 6 months? Past 12 months?" (Alkhwaldeh et al., 2014, p. 2). The independent variables were predisposing (age, gender, tobacco use, employment status, education level, and marital status), enabling (monthly insurance and health insurance coverage), and need (chronic illness self-reports; Alkhwaldeh et al., 2014). Alkhwaldeh et al. used the Elderly Cognitive Assessment Questionnaire instrument to measure older adults' cognitive impairment.

A Likert scale 1 to 10, 1 represented the "worst I have ever felt," and 10 represented the "best have ever felt," was used to measure the perceived general health of the participants (Alkhwaldeh et al., 2014, p. 2). The participants were asked, "What number would best represent your general health today? 6months ago? 12months ago?" (pp. 2–3).

Alkhwaldeh et al. (2014) also used the 12-item Short Form Health Survey version 2 to measure the perceived general health status for the past 1 month. The domains identified were "physical function, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health" (p. 3) labeled as physical component summary (PCS) and mental component summary (MCS).

The data were analyzed using descriptive statistics, chi-square test of association for categorical variables, Pearson correlations to measure associations between independent and dependent variables, and other correlation tests (Spearman's rho, point biserial r, phi coefficient (ϕ), and Cramer's V methodology; Alkhwaldeh et al., 2014). Alkhwaldeh et al. created binary logistic models to analyze the predictors of primary health care service utilization in the past 1 month, past 6 months, and past 12 months.

The University of Jordan School of Nursing and the Jordan Ministry of Health Ethical Committee granted Alkhwaldeh et al. (2014) permission to conduct this study. Alkhwaldeh et al. informed the participants that their responses would be confidential and their identity would remain anonymous. Alkhwaldeh et al. obtained informed verbal consent from all those involved in the study.

The limitations disclosed were the self-reported use of health care services, chronic illnesses, and participants' health status, and generalization of the results for using primary health care services in other governorates or Jordan could not be done (Alkhwaldeh et al., 2014). Alkhwaldeh et al. had to take precaution to eliminate recall bias.

Data were analyzed for 190 older adults in which the average age of the participants was 64.6 (6.7 SD), and 57.4% were male and 42.6% female. Of the 190 participants, 88.4% were married, 36.8% were not formally educated, 42.1% had a primary school education, and 21.1% had a secondary education or higher; 93.7% of participants reported they had health insurance when 6.3% participants reported they did not have health insurance (Alkhwaldeh et al., 2014). The income mean per month per

participant was 218.2 (88.7 SD) Jordanian dinar currency; 27.9% participants reported they did not have a chronic illness, when 72.1% reported they did have a chronic illness, and 96.8% participants reported they had no cognitive impairment, when 3.2% participants reported they had cognitive impairment (Alkhwaldeh et al., 2014). The perceived general health status in the past month PCS average was 41.28 (11.0 SD), and the MCS average was 50.46 (7.3 SD; Alkhwaldeh et al., 2014). The perceived health status in the past 6 months was 6.46 (1.3 SD) and in the previous 12 months was 6.64 (1.3 SD; Alkhwaldeh et al., 2014).

Alpha levels of 0.05* and 0.01** were used for this study. Older adults who used significantly more primary health care services in the past 1 month (a) had no formal education or had a primary school education, $p = -0.220$**, (b) were nonsmokers, $p = -0.162$*, (c) had a chronic illness, p = .453**, (d) had perceptions of poorer health status today, $p = -0.272$**, and (e) had symptoms or poor physical health, $p = -0.377$** (Alkhwaldeh et al., 2014).

The factors significantly associated with increased primary health care services utilization in the past 6 months were (a) increasing age, $p = 0.229$**, (b) being unemployed or retired, $p = 0.178$*, (c) having no formal education or only a primary school education, $p = 0.200$**, (d) being nonsmokers, $p = -0.166$**, (e) having a chronic illness, $p = .633$**, (f) those having poor self-rated general health status today, $p = -0.355$**, and (g) those having a poor self-rated general health status in the past 6 months, $p = 0.409$** (Alkhwaldeh et al., 2014).

The predictor variables associated with significantly greater primary health care utilization in the past 12 months were (a) increasing age, $p = 0.205^{**}$, (b) being unemployed or retired, $p = .218^{**}$, (c) having no formal education or only a primary school education, $p = -.240^{**}$, (d) being nonsmokers, $p = -.145^{*}$, (e) having a chronic illness, $p = .650^{**}$, (f) those having poor self-rated general health status today, $p = -.373^{**}$, and (g) those having poor self-rated general health status in the past 12months, $p = -.306^{**}$ (Alkhwaldeh et al., 2014).

Alkhwaldeh et al. (2014) concluded that although chronic illness was the most significant predictor of primary health care services utilization, all the factors could be linked to the use of primary health care services.

Van de Ven (2014) conducted a secondary analysis of longitudinal data from patient experience surveys carried out in 1996 and 1997 by the Picker Institute in Boston, Massachusetts, and data from the Healthcare Organization Survey (HOS). Van de Ven wanted to determine the relevant attributes linking satisfaction to patient experience of care as well as the causal connection between "dimensions of care to clinic size, economic performance, and employee job satisfaction" (p. 131). Data collected from the HOS in 1996 and 1997 was used to assess the attitudes of providers (Van de Ven, 2014). The third data set collected for this study comprised data from records audited for productivity and the second year profits for both clinics (Van de Ven, 2014). Van de Ven examined the contextual factors (clinic size and clinic employee job satisfaction), process factors (activities performed by healthcare providers and staff), and outcome factors

(overall patient satisfaction and indicators of clinic performance—physician productivity and clinic profitability). The goals of this research were

1. to empirically identify and determine the relative importance of different aspects of the patient care experience as they relate to overall satisfaction of patients served by primary care clinics
2. to determine how the various dimensions of care experienced by patients relate to patient characteristics, clinic size, and economic performance as well as the attitudes of clinic physicians, nurses, and staff toward their work as clinical care providers. (Van de Ven, 2014, p. 132).

The sampling frame for the patient experience survey consisted of 8,363 patients in the first year and 7,733 patients in the second year. The patients participating in the study received medical services from the primary care clinics that were part of a large medical group in an integrated health system located in two states in the Midwest (Van de Ven, 2014). The patients could receive services such as obstetrics and gynecology, family practice, and internal medicine at the clinics (Van de Ven, 2014).

After removal of the patients' personal identifying information, Van de Ven (2014) evaluated 23 questions from the survey. The independent variables for the patient survey were participative provider care, staff courtesy, health status, staff follow-up, waiting, and medical explanations, and the dependent variable was overall satisfaction (Van de Ven, 2014). Based on the responses of the participants, the study showed strong correlations between participative patient care and staff courtesy (r = .41 for 1996 and 1997; Van de Ven, 2014, pp. 133, 136). The previous two variables were found to be

directly related to staff follow-up ($r \geq .27$ in 1996 and $\geq .24$ in 1997) and medical explanations ($r \geq .29$ in 1996 and $\geq .28$ in 1997; Van de Ven, 2014, pp. 133, 136). The results showed participative provider care, and staff courtesy had an indirect association with waits and delays ($r = -.33$ in 1996 and $-.30$ to $-.32$ in 1997; Van de Ven, 2014, pp. 133, 136). However, correlations between patients' self-reported health status and the other elements were less than .08 in magnitude.

Van de Ven (2014) examined the correlation between specific patients' demographics (gender, age, and education), patients' "willingness to recommend the clinic to family and friends, satisfaction with the purpose of the visit, and overall visit rating" (pp. 133–134), and patient care experience. Van de Ven reported that patient demographics and satisfaction measures had a direct and significant correlation with participative provider care, staff courtesy, staff follow-up, and medical explanations. Van de Ven reported an indirect correlation between participative provider care, staff courtesy, staff follow-up, and medical explanations in regard to waiting time. However, it was reported that there was not a correlation to the self-reported health status ($r \leq .08$) (Van de Ven, 2014). Van de Ven did report a finding of some exceptions to correlations between patient age and health status ($r = .24$ in 1996 and .27 in 1997) and patient education and health status ($r = -.23$ in 1996 and $-.22$ in 1997). Van de Van found that gender and level of education did not play a role in "determining patients' assessments of their care experience" (p. 133); however, most of the correlations fell below .06 and were statistically insignificant.

Van de Ven (2014) used factor analysis to determine the variance in patient responses, alpha coefficients to determine internal consistency, and because of the assumption of correlations between satisfaction elements, the principal component analysis with oblique rotation was used. A multiple regression analysis was employed to determine the importance of the six care experience elements based on the perspective of the patient's visit using a 5-point Likert scale with a range from poor to excellent (Van de Ven, 2014).

The sampling frame for the HOS consisted of 69 managers, 153 physicians, 429 nurses and clinicians, and 318 support staff in the first year and 83 managers, 207 physicians, 524 nurses and clinicians, and 334 support staff in the second year (Van de Ven, 2014). Van de Van employed correlations and regression analysis to evaluate the relationship between the patient experience of care and job satisfaction (doctors, nurses, and staff, clinic size, and performance). Van de Van averaged the patients' responses for clinics that provided the medical services. Van de Van also averaged responses to the HOS of the employees who worked in those clinics. Van de Van merged the data for size, profitability, and physician productivity for the clinics. After cleaning the data, the analysis was performed for 42 clinics. Van de Van reported "patient satisfaction was not highly correlated with employee job satisfaction ($r = .04$), patient satisfaction was negatively correlated with clinic size ($r = - .40$), and patient satisfaction was not correlated to clinic profitability ($r = .04$) or clinic productivity ($r = .02$)" (pp. 136–137). Clinics' increase in profits, employees' job satisfaction, clinic size, and the productivity of the providers at clinics did not influence patient satisfaction (Van de Ven, 2014).

Causes for Rising Health Care Expenditures

The United States finds rising health care expenditures challenging to control. Bodenheimer (2005a) explained the opposing roles of each actor, which was described as a "battleground" between the actors (purchasers and insurers) who expended dollars on health care and the actors (providers and suppliers) who received dollars for providing health care services. The providers and suppliers are against containing health care costs, whereas purchasers and insurers are for containing health care costs (Bodenheimer, 2005a). Bodenheimer examined several perspectives for the reason of rising health care costs and cost containment.

Bodenheimer (2005a) found that some scholars had a difference of opinion regarding the emphasis placed on rising health care costs. Some scholars see rising health care costs not as severe as some might think because of the increase in jobs for the economy and increase in healthy outcomes (Bodenheimer, 2005a). Other scholars see rising health care costs as a primary concern because health care becomes unaffordable and impacts the purchasers of health care patients, local and state governments, and employers (Bodenheimer, 2005a). Bodenheimer believed that forces outside the scope of health care factored into the increasing health care costs. Bodenheimer argued that the economy is a driving force for growing health care costs. When a country is wealthy, the country pays more for health care per capita. Bodenheimer also looked at the demographics of an aging population as a possible cause for rising health care costs. Research has shown an increase in the elderly and the rate of growth for health care

spending for this population, but these increases are slow, so the impacts on rising health care costs are minimum (Bodenheimer, 2005a; Meara, White, & Cutler, 2004).

Policy gurus thought that health care costs would continue to rise without market competition and patients cost sharing on their medical care (Bodenheimer, 2005a). They argued that the cost of health care would be set by supply and demand in a competitive market versus an individual entity (Bodenheimer, 2005a). This concept assumed that purchasers would be able to make astute decisions when purchasing health care. One major contributor to rising health care expenditures is technologic advances (Bodenheimer, 2005b). New technology used to treat medical conditions can improve health outcomes where the old technology lagged. Cutler and McClellan (2001) evaluated the benefits and costs of technologic advances. The scholars examined five conditions: (a) breast cancer, (b) cataracts, (c) depression, (d) heart attacks, and (e) low birth weight. The cost of the technology for treating cataracts, depression, heart attacks, and low birth weight did not outweigh the cost of the benefits for treating these conditions (Cutler & McClellan, 2001). However, the cost of the technology used to diagnose and treat breast cancer and the health outcomes balanced each other.

Bodenheimer (2005b) found that administrative costs contributed to rising health care expenditures. Public and private insurers burden providers with administrative responsibilities such as billing for patient services. Administrative overhead is higher for private insurers than public insurers (Bodenheimer, 2005b). Bodenheimer argued that simplifying the insurance system would help contain cost. Scholars asserted that the absence of strong cost control measures such as expenditure caps and global budgets

contribute to health care expenditures rising (Bodenheimer, 2005b). Expenditure caps and global budgets have their drawbacks. When expenditure caps are implemented, providers have a tendency to increase the quantity of services provided to patients. This is known as "volume creep" (Bodenheimer, 2005b). When physicians in Canada increased the volume of services rendered, there was a reduction in the fee for the services provided to avoid exceeding the yearly expenditure cap (Bodenheimer, 2005b). In the United States, Medicare implemented a sustainable growth rate mechanism that tracks providers' expenditure targets (Bodenheimer, 2005b). With this mechanism in place, physicians who exceed the expenditure target would have their fees for the following year reduced. Bodenheimer argued that global budgets would be most effective under a single payer. Administrative costs would be reduced, and some providers may be allowed to make decisions on how the budget is spent (Bodenheimer, 2005b). A disadvantage of global budgets is that the budget can be too small, impacting access to high-quality care by limiting access to new technology (Bodenheimer, 2005b).

Scholars argued that when providers of care have market power, the cost of health care increases rapidly, and when health care purchasers have market power, the cost of health care increases slowly. Market power for the provider is when an insurer signs a contract with the provider for the rate requested resulting in lucrative reimbursements (Bodenheimer, 2005c). Market power for the insurer is when the insurer does not sign a contract with the provider for the rate requested (Bodenheimer, 2005c). Bodenheimer asserted that the market power for providers could be controlled by offsetting the power of providers and insurers as well as implementing regulations.

Bodenheimer (2005c) examined the relationship between high health care expenditures, provider fees, and increased utilization of services. Comparison of the cost of health care in the United States to the cost of health care in other countries for similar medical conditions and procedures reveals that they cost more in the United States than in other countries (Bodenheimer, 2005c). Health care economists believe that the method in which providers are reimbursed affects rising health care expenditures. Economists argued that physicians who were reimbursed under the FFS reimbursement method performed more services than providers who were reimbursed under the capitation reimbursement method. Providers reimbursed under the capitation reimbursement method share financial risk for services provided to the patients so that they would limit the number of services (Bodenheimer, 2005b). Physicians in other countries were slow using new technology unlike physicians in the United States (Bodenheimer, 2005b). For example, physicians in the United States may increase the number of services such as magnetic resonance imaging (MRI) scans; whereas, other countries would not increase the use of MRI scans or have an MRI scanner.

Cost containment strategies can be implemented after identifying contributing factors to increasing health care costs. As noted by Bodenheimer (2005a, 2005b, 2005c), administrative costs, an aging population, lack of market competition, patients not cost sharing on their medical expenses, technological advances, and the nation's economy contributed to growing health care costs. However, Bodenheimer (2005a) and other scholars found that the elderly population contribution to increasing the cost of health

care was minute. Technologic advances were seen as a major contributor to rising health care costs.

Critical Analysis

Critical Analysis of Theoretical Frameworks

Understanding the complexity of access to quality care is paramount but often misunderstood by those trying to access a system that provides quality care. Andersen's behavioral model of health services use has undergone several modifications but is frequently used as a framework to determine and assess the individual needs to accessing and utilizing health care. The Andersen's behavioral use model incorporated the importance of national policy on access to care as well as provided various individual determinants that may influence the access to care. Andersen's model does not inform decision makers if the individuals who need care received the care when care was needed as well as where care was needed. However, Andersen's behavioral use model is useful for providing a point of entry to the health care system.

The point of intersection of the Andersen and Donabedian theoretical models plays a crucial role in accessing health care and developing a health care system that provides quality care. Donabedian argued that the availability of facilities not be an assurance of access to care (Aday & Andersen, 1974; Donabedian, 1972, 1980). The health care system with the appropriate number of facilities with the right mix of providers to patient ratio is essential to "protecting and promoting the quality of care" (Donabedian, 1980, p. 82). Therefore, as Donabedian pointed out having the facilities in

place does not necessarily mean that individuals are receiving quality care, they must have access to enter into the system to receive care.

Using Andersen's and Donabedian's theoretical models together places emphasis on the need for a change in policy for access to quality care and the impact of that policy changes factor into patient experience.

Critical Analysis of Literature on Methodology

Based on the literature review, researchers have used descriptive statistics, correlation, and regression analysis. Alkhwaldeh et al. (2014) used descriptive statistics, chi-square test of association for categorical variables, Pearson correlations to measure associations between independent and dependent variables, and other correlation tests (e.g., Spearman's rho, Point Biserial r, Phi coefficient (ϕ), and Cramer's V methodology) in a cross-sectional study to evaluate the utilization patterns for primary health care factors and predictors of utilization and nonutilization of health care for older adults Jordan. As previously mentioned, Alkhwaldeh et al. concluded that although chronic illness was the most significant predictor of primary health care services utilization, all the factors could be linked to the use of primary health care services.

Owusu-Frimpong et al. (2010) employed an ANOVA to explore and compare the respondents' perceptions of access to care to their experience with access to care. The Pearson chi-square statistics and associated *p*-values were used to establish the extent of correlations between overall patient satisfaction and the patients' demographics (Owusu-Frimpong et al., 2010). Owusu-Frimpong et al. found significant problems with access to care.

Van de Ven (2014) analyzed the correlation between patient experience (participative provider care, staff courtesy, health status, staff follow-up, waiting, and medical explanations) and patient satisfaction in the first and second year. Correlations between participative patient care, staff courtesy follow-up, and medical explanations were strong and positively correlated to patient demographics and satisfaction elements (Van de Ven, 2014, pp. 133, 136). Correlations between participative provider care and staff courtesy were negatively correlated with waits and delays (Van de Ven, 2014). Correlations for gender and education were not statistically significant (Van de Ven, 2014). Van de Ven employed a multiple regression analysis to determine the importance of the six care experience elements based on the perspective of the patient's visit using a 5 point Likert scale with a range from poor to excellent. The results indicated the most powerful predictors of patient satisfaction were participative provider care and staff courtesy (Van de Ven, 2014).

Zwanziger et al. (2001) conducted a study using secondary data; data from two CHAMPUS beneficiary surveys and claims data for beneficiaries surveyed were used to evaluate cost, utilization, and patient satisfaction for a 5-year CRI demonstration. Zwanziger et al. used multivariate analysis to examine overall cost, and multivariate regression models were used to assess continuous (linear) and categorical (logistic) variables. Zwanziger et al. concluded that the CRI demonstration was successful: Although the cost of health care increased, beneficiary satisfaction and access to care in the MTF also increased.

The literature review found a link between positive patient care experiences and patient adherence to treatment and influenced adherence to the treatment process for clinical outcomes for inpatient settings. Price et al. (2014) determined that there was a correlation between positive patient experiences, better hospital patient safety culture, and a decrease in unnecessary health care utilization. As mentioned earlier, measuring the experience of patients in patient-centeredness care environments is vital as it increases accountability and quality improvements based on reported patient experiences.

The statistical tests discussed are relevant to this descriptive cross-sectional study. The tests would provide a summary of the data, information whether to accept or reject the hypothesis, the correlation between and within the variables, predictors for accessing care, and relevant elements for patient experience that could increase patient satisfaction.

Summary and Transition

In summary, this chapter provided information on the theoretical frameworks, Andersen's behavioral use model, and Donabedian's quality of care model, used for this research, and explained the health care system in the United States and the Philippines. This section also provided information regarding the MHS and the evolution of the TRICARE benefit as well as major themes from the relevant literature regarding managed care and the importance of measuring patient experience and the statistical analysis for assessing quality outcomes. Integrating two health care systems from two countries is complex and challenging. As shown, there are different laws that must be followed when the U.S. health care system is integrated with a health care system in a different country. To achieve buy-in from providers in a host nation country, the United

States must devise a strategy to incentivize host nation providers to accept its reimbursement methodology. Implementing a closed provider network Chapter 3 will provide information regarding the sample frame, an overview of the data plan, covariates, independent and dependent variables, ethical considerations for human subjects, and the statistically methodology selected to explore relationships between and within variables. The assessment of the variables identified in Chapter 3 should help determine if the expected outcomes were or were not met and the acceptability and efficiency of an alternative method for delivering health care to TRICARE Standard beneficiaries who live in the Philippines and receive care in the designated Demonstration areas.

Chapter 3: Research Method

Data Analysis Plan

This cross-sectional quantitative study evaluated patient experience for TRICARE Standard beneficiaries who received medical care under the DoD TRICARE Philippine Demonstration using secondary data provided by the DHA under the DoD. The Philippine Demonstration tested the efficacy and acceptance of an alternative approach to health care rendered by certified Philippines providers by establishing a closed network of approved Demonstration providers in designated Demonstration areas selected by the DoD. The goals of the Philippine Demonstration were to control rising health care costs, reduce aberrant billing activity, and eliminate balance billing without jeopardizing access to high-quality health care for beneficiaries. The TOP contractor under contract with the DoD and their subcontractor conducted the 3-year Philippine Demonstration using a phased approach. There are three distinct phases under the Philippine Demonstration:

1. Phase 1 of the Philippine Demonstration started on January 1, 2013, in Metro Manila and its surrounding areas: Angeles City, Pampanga; Olongapo, Zambales.
2. Phase 2 of the Philippine Demonstration started on December 1, 2013, in the province of Cavite, comprising General Trias, Naic, Bacoor, Imus, and Cavite City.
3. Phase 3 of the Philippine Demonstration began on July 1, 2014, in Iloilo City, Iloilo.

This study concentrated its efforts on the following Demonstration locations:

1. Phase 1 of the Philippine Demonstration started on January 1, 2013, in Metro Manila and its surrounding areas.
2. Phase 2 of the Philippine Demonstration started on December 1, 2013, in Cavite City.
3. Phase 3 of the Philippine Demonstration began on July 1, 2014, in Iloilo City.

This chapter includes the data analysis plan, methodology, and ethical considerations for the project, and a concluding summary.

Operational Definitions of Variables

Independent Variable

The respondents' gender was identified as male or female. Respondents whose age range was between 18 and older than 62 years were included in the survey. The TRICARE beneficiary categories are TOP Standard, TRICARE for Life, TRICARE Retired Reserve, TRICARE Reserve Select, and TYA. These beneficiaries could be a military retiree, family member of a military retiree, family member of an active service member, or reserve member. Satisfaction with health care and overall satisfaction with the Demonstration helped to assess as well as inform which attributes are important regarding patient experience.

The coefficient variable was the designated Demonstration area (the city) in which the care was rendered:

1. Phase 1: Metro Manila and its surrounding areas
2. Phase 2: Cavite City, Cavite
3. Phase 3: Iloilo City, Iloilo

Dependent Variable

Financial burdens assess if the beneficiary's out-of-pocket cost exceeds the annual deductible and cost share per visit and confidence that the TRICARE program can meet their health care needs. This variable could also be indicative that the approved Demonstration provider is not balance billing the beneficiary. Locating an approved Demonstration provider assesses the difficulty in finding a provider.

Population

Approximately 10,000 TRICARE Standard beneficiaries live in the Philippines; however, based on claims data, only 4,909 beneficiaries living in the Philippines used the TOP Standard option 2 years prior to Phase 1 of health care delivery on January 1, 2013. The targeted population for the study consisted of TRICARE Standard beneficiaries who lived in the Philippines and accessed health care in designated Demonstration areas. The DoD's selection of respondents for the study was nonbiased as the survey was a consensus survey and all beneficiaries who met the inclusion criteria had the opportunity to respond to the survey. The respondents did not receive compensation for their participation. Because the Philippine Demonstration was voluntary and beneficiaries living in other provinces in the Philippines could receive care in designated Demonstration areas, it was difficult to estimate the number of TRICARE beneficiaries who would make up the accessible population of the study.

Sampling Frame Inclusions and Exclusions

The sampling frame included TRICARE Standard beneficiaries comprising military retirees, family members of military retirees, and family members of active-duty

service members who lived in the Philippines and accessed health care in designated Demonstration areas: Metro Manila and its surrounding areas; Cavite City, Cavite; and Iloilo City, Iloilo. TRICARE beneficiaries enrolled in TOP Prime and TOP Prime Remote, TRICARE Standard beneficiaries under 18 years of age unless they were considered a TRICARE beneficiary in their own right, and TRICARE Standard beneficiaries whose home address was not in the Philippines were excluded from participating in the survey. The home address was determined by the address listed on the TRICARE DoD/CHAMPUS Claim Form–Patient's Request for Medical Payment (DD Form 2642). The web-based survey was administered to TRICARE beneficiaries using the e-mail addresses in M2, the information system owned by the DoD.

Sample Size

The sample size requirement was calculated for logistic regression using a Pearson correlation with a modified power using G*Power 3.1.7. This correlation assumed a medium effect size and a modified power of (0.80/0.91) 0.88. If statistical significance was assessed within a 95% confidence interval ($\alpha = .050$), the sample size required to assure empirical validity was 102 (Faul, Erdfelder, Buchner, & Lang, 2013).

Accessing Data

The DHA Data Sharing Agreement Application was submitted to the DHA Privacy and Civil Liberties Office for approval to access the government data files from the program office that owns the data. Following the approval process, the DHA Decision Support Division provided deidentified data on an encrypted computer disk. Obtaining deidentified data for this research presented a problem, as the original plan was to include

various predisposing and enabling factors that would increase the understanding drivers for access to health care. The data were collapsed to remove all 18 Health Information Portability Accountability Act identifiers. I had to work closely with the analysts providing data to obtain usable data to complete this research.

Level of Measurement

The demographic variables of interest were gender, age, and Demonstration Phase I, II, and III. The predictor variables were (a) locating an approved provider, (b) satisfaction with requesting a waiver, (c) financial burden and confidence that TRICARE meets health care needs, and (d) satisfaction with health care and overall satisfaction with Demonstration.

Methodology

This cross-sectional quantitative descriptive study included some nonparametric analysis of relationships between specific variables. I calculated frequencies and percentages for any categorical variables of interest, such as gender. Means and standard deviations were calculated for any continuous variables of interest, such as age (Howell, 2010).

Data were analyzed for statistical significance using analysis of variance calculated in SPSS Version 22. Prior to analysis, data were screened for validity, missing data, patterns of missing data, and outliers. I used ANOVA to assure that the data met the assumptions of independence, normality, and homogeneity variances. The Wilks–Shapiro statistic was used to assess the assumption of normality. The Levene's homogeneity-of-variance test was used to assess the assumption homogeneity variance. Multicollinearity

was assessed by testing tolerance and the variance inflator factor within SPSS. Due to the nonparametric nature of the Spearman rho correlation, none of the restrictive assumptions typically associated with a correlation test needed to be met (Morgan, Leech, Gloekner, & Barrett, 2007). I created standardized values for each scale level research variable and examined for values that fell above 3.29 and those that fell below −3.29, which identified outliers (Tabachnick & Fidell, 2012). Cases with missing data were also examined for nonrandom patterns. The DHA conducted a survey evaluating the Philippine Demonstration from which secondary data were obtained to answer the RQs for this study. Surveys for participants who did not provide the phase in which they received care were excluded.

Research Question 1

RQ1: How has the Demonstration affected the beneficiaries' financial burdens and confidence that their health care needs will be met?

$H_0 1_a$: There is no statistically significant relationship between financial burdens and satisfaction with the Demonstration overall.

$H_a 1_a$: There is a statistically significant relationship between financial burdens and satisfaction with the Demonstration overall.

$H_0 1_b$: There is no statistically significant relationship between financial burdens and confidence that health care needs will be met.

$H_a 1_b$: There is a statistically significant relationship between financial burdens and confidence that health care needs will be met.

To assess RQ1, I conducted two Spearman rho correlations. The first Spearman correlation assessed the relationship between the dependent variable of financial burden (i.e., Item 11) and the independent variable of overall satisfaction (i.e., Item 13). Item 11 asked participants to compare their out-of-pocket expenses for health care before the Demonstration with the same expenses after the Demonstration and ranged in responses from (a) *higher now* to (c) *lower now*. Item 13 asked about their overall satisfaction with the Demonstration and ranged from (a) *very satisfied* to (e) *very dissatisfied.* The second Spearman correlation assessed the relationship between the dependent variable of confidence that health care needs were met (i.e., Item 12) and the independent variable of overall satisfaction (Item 13). Item 12 asked participants whether the Demonstration increased their confidence that TRICARE was able to meet their health care needs and ranged in responses from (a) *strongly agree* to (e) *strongly disagree.* Each survey item in the set of analyses represented an ordinal response variable. The Spearman rho correlation was the appropriate analysis when the goal of the research was to assess the strength or existence of a statistically significant relationship between two ordinal variables. I used Cohen's *d* (Cohen, 1988) to evaluate the correlation coefficient to ascertain the magnitude of the difference.

Research Question 2

RQ2: What is the relationship between gender, age, and health care finder functionality for accessing quality health care under the Demonstration in Metro Manila and its surrounding area, Cavite City, Cavite, and Iloilo City, Iloilo?

$H_0 2_a$: There is no statistically significant relationship between gender, age, and health care finder functionality access to quality health care in Metro Manila and its surrounding areas, Cavite City, Cavite, and Iloilo City, Iloilo.

$H_a 2_a$: There is a statistically significant relationship between gender, age, and health care finder functionality access to health care in Metro Manila and its surrounding areas, Cavite City, Cavite, and Iloilo City, Iloilo.

To examine RQ2, I conducted a series of regressions. Because the relationships between the predictors, gender and age, and the dependent variable, health care finder functionality, were in question, I conducted a regression analyses in two stages on the overall data set to include Metro Manila and its surrounding area, Cavite City, Cavite, and Iloilo City, Iloilo. In the first stage, I conducted the regression on the overall data set, and this regression included data from Metro Manila and its surrounding area, Cavite City, Cavite, and Iloilo City, Iloilo. In the second stage of analysis for RQ2, I conducted regressions for Metro Manila and its surrounding area, Cavite City, Cavite, and Iloilo City, Iloilo. Findings from both the descriptive statistics and from the normality testing for each of these regressions indicated the possibility of acquiescence bias and resulted in a series of secondary analyses through binary logistic regression to confirm the findings. To accomplish this, the satisfaction variable was transformed into a dichotomous outcome, where zero represented any category less than very satisfied, and one represented a response of very satisfied.

To examine RQ3, I conducted descriptive statistics on responses to Items 3 and 4, as applicable. Item 3 asked participants whether they had submitted a waiver to receive

care from a nonapproved Demonstration provider. If participants responded that they had submitted a waiver, the participant was asked to respond to Item 4, which asked how satisfied they were with the provider and had response categories ranging from (a) *very satisfied* to (e) *very dissatisfied*. Thus, responses to Item 3 were presented to show the number who did not submit a waiver, while Item 4 identified how satisfied the proportion of participants who did submit a waiver were with their nonapproved provider. I conducted means and standard deviations to detail the spread and central tendency of responses, while frequencies and percentages provided the proportionality of response rates.

Research Question 3

RQ3: What is the relationship between a closed network, actual beneficiary out-of-pocket cost and quality health care in Demonstration areas?

$H_0 3_a$: There is no statistically significant relationship between actual beneficiary cost and a closed provider network.

$H_o 3_a$: There is a statistically significant relationship between actual beneficiary out-of-pocket cost and a closed provider network.

$H_0 3_b$: There is no statistically significant relationship between quality health care and a closed provider network.

$H_a 3_b$: There is a statistically significant relationship between quality health care and a closed provider network.

To examine RQ3, three questions from the survey were chosen as representations of the beneficiary out-of-pocket costs and quality health care. The first question asked

participants to rate their out-of-pocket costs in relation to those same costs prior to the Demonstration. To examine the quality of health care, participants were asked to rate their satisfaction on a scale from 0 to 10. Finally, participants were asked to compare their current experience with receiving health care to their experience before the Demonstration. However, to test whether these responses were significantly higher or lower than their mid-level response categories, a series of one-sample *t*-tests was conducted.

Threats to Validity

Threats to validity and reliability should be considered when designing research. Trustworthiness and credibility come to mind when gathering data for a study. All researchers should want to ensure that their research is reliable and valid. Bowling (2010) asserted that a research instrument must be assessed using test–retest, interrater reliability, and internal consistency to determine reliability. The research instrument should be adequately tested for validity numerous times using the same population it was intended to test before being considered valid (Bowling, 2010). A research instrument can be reliable without being valid, but a research instrument that is not reliable is not valid. Researchers using the same research instrument should be able to replicate the results of previous research using the same criteria and environment (Creswell, 2009; Field, 2007). When the research instrument measures what it is designed to measure, the research instrument is considered to be valid (Creswell, 2009; Field, 2007). The survey instrument that was used for this descriptive cross-sectional quantitative study was developed, and secondary data were analyzed; therefore the instrument must be assessed

for reliability and validity. Creswell (2009) recommended evaluating the instrument by determining if there is a connection between the variables, RQs, and items on the survey instrument. Cleaning the data increased reliability, help with consistency, and accuracy. The data cleaning process should be performed with care when removing outliers and duplicate data. Prior to cleaning the data, a copy of the original should be saved and security measures should be taken to protect the data. The performance of a statistical test could determine internal consistency: Perform a reliability analysis, and check the statistical assumptions for violations.

Statistical Conclusion Validity

Violation of a statistical assumption poses a threat to statistical conclusion validity (Creswell, 2009). Check statistical assumptions to avoid making the wrong conclusions. The statistical assumptions are assumptions of independence, normality, homogeneity of variances, interval, and multicollinearity (Field, 2007). According to Miles and Shevlin (2001), a violation of the assumption of independence can be difficult to detect. However, when autocorrelation occurs, the assumption of independence has been violated, which can happen with a time series design or clustered sampling design (Miles & Shevlin, 2001). The Wilks–Shapiro statistic can evaluate the assumption of normality. The Levene's homogeneity-of-variance test can assess the assumption homogeneity variance. When the distance between intervals is not equal, there is a violation of the assumption of interval. Multicollinearity can be assessed with the tolerance statistic and the variance inflator factor. The appropriate actions should be

taken to mitigate the threat of conclusion validity when there is a violation of any statistical assumption.

Ethical Consideration

The study was submitted to the Walden University Institutional Review Board (IRB) for approval before requesting data files and data analysis. After receiving conditional approval from Walden University IRB, a copy of Walden University's IRB conditional approval was submitted to the DHA Human Research Protection Board, which determined that human subjects would not be used for this research. After receiving the determination from the DHA Human Research Protection Board, a Data Sharing Agreement Application was submitted to the DHA. Upon receipt of the approved Data Sharing Agreement Application 17–1810, the final package was submitted to Walden University IRB for final approval. After receiving Notification of Approval to Conduct Research from Walden University IRB (approval no.01-31-18-0082516), the request was submitted to the Decision Support Division for access to the TRICARE Philippine Demonstration raw survey and claims data files. Although this study consisted of a secondary analysis, the policies and regulations for Human Research for the Protection of Human Subjects were followed. All data have been maintained on an encrypted removable storage disc under lock and key accessible only by the primary investigator. After analysis, the data were stored on an encrypted removable storage disc under lock and key accessible only to the primary investigator and will be properly destroyed after 5 years.

The principal investigator (PI) for the Philippine Demonstration Beneficiary Satisfaction Questionnaire who conducted the original research used a combination of Web and telephone surveys and provided documentation of approval to conduct the research from Liberty's IRB. The PI did not target any members from vulnerable populations. The survey participants did not receive financial incentives or gifts for their participation. The survey was conducted over the telephone, by which the interviewers obtained informed consent from the participants. The interviewers informed the participants that participation in the survey was voluntary. If the participant did not want to participate in the survey, the interviewer informed the participant that his or her TRICARE benefits would not be affected. Additionally, the participant had the option to stop the survey if he or she became uncomfortable. The participants were given a telephone number to contact the PI if they had any questions as well as a different telephone number for technical difficulties for the Web survey. The investigator did not have any conflicts of interest.

Summary

This chapter discussed the methodology, data analysis plan, and ethical considerations used in this cross-sectional quantitative analysis for evaluating TRICARE beneficiaries' satisfaction under the Philippine Demonstration. Assessing statistical significance within a 95% confidence interval ($\alpha = .050$), the sample size for the study with a medium effect size required to assure empirical validity was 102. The database contained approximately 8,000 TRICARE Standard beneficiaries living in the Philippines, of whom 4,909 beneficiaries had accessed their TRICARE benefits. Chapter

4 presents the results of the descriptive and inferential analysis for the RQs and hypotheses presented.

Chapter 4: Results

Introduction

In response to TMA's (2008a) identification of a major concern in the Philippines with rising health care costs, as well as the Philippines' reputation of ubiquitous health care fraud with TRICARE, the DHA, DoD, implemented administrative controls to deter fraud in the Philippines (TMA, 2008a). Although the administrative controls were implemented, the cost of health care continued to rise. Therefore, the DHA implemented the DoD TRICARE Philippine Demonstration in 2013 to determine the efficacy and acceptability of using an alternative method to deliver health care, increase access to health care, and decrease beneficiary out-of-pocket costs while maintaining quality health care. The purpose of this quantitative cross-sectional study was to address questions regarding TOP Standard beneficiaries' ability to access quality health care and their out-of-pocket costs for health care under the Philippine Demonstration.

The following chapter includes a description of the data collection procedures pertinent to the sample used for analysis. In this section are a description of the sample and a comparison to the population of interest, intended to clarify the generalizability of the results. The results of the analyses for RQ1, RQ2, and RQ3 follow, with an explanation of the assumptions required for each assessment, as well as the probability levels of the findings and an explanation of what they signify. The chapter closes with a summary of the findings and description of what will be included in the following discussion chapter.

Data Cleaning

I removed the responses such as "suppressed," "don't know," and "unsure" unless ordered correctly. For example, an unsure between agree and disagree is applicable, while a separate category outside of Likert ranking is not. I reversed items for better interpretability (appended with "_Reverse"):

- Q1 was recoded for higher scores indicative of higher satisfaction.
- Q4 was recoded for higher scores indicative of higher satisfaction.
- Q10 was recoded for higher scores indicative of better experience.
- Q13 was recoded for higher scores indicative of higher confidence.

Data Collection

Results

The final sample for analysis consisted of responses from 180 individuals in the Philippines who received care under the TRICARE Demonstration and completed a survey on their experiences with the Demonstration and health care thereafter. Of these respondents, a majority were male (53.3%), though an additional 11.1% did not provide this information. Exactly half of the available sample was retired, though 11.1% of the sample provided no information regarding their beneficiary group either. Finally, though the same 11.1% did not indicate an age, the sample consisted of a slight majority of those within the 60–79 years of age group. Many of the sample's participants were also within the 40–59-year age group (n = 30, 16.7%) or 80 years or older age group (n = 28, 15.6%). With a minority of the sample below the age of 20 (6.1%), this sample was highly

representative of older individuals. Demographic information for each possible grouping of these three categories of descriptive information is available in Table 1.

Table 1

Demographic Information for Final Sample

Variable	*n*	%
Gender		
Female	64	35.6
Male	96	53.3
No response	20	11.1
Beneficiary group		
Retired	90	50.0
Retired dependent	70	38.9
No response	20	11.1
Age (years)		
0–19	11	6.1
20–39	0	0.0
40–59	30	16.7
60–79	91	50.6
80+	28	15.6
No response	20	11.1

Note. N = 180.

Research Question 1

RQ1: How has the Demonstration affected the beneficiaries' financial burdens and confidence that their health care needs will be met?

$H_0 1_a$: There is no statistically significant relationship between financial burdens and satisfaction with the Demonstration overall.

$H_a 1_a$: There is a statistically significant relationship between financial burdens and satisfaction with the Demonstration overall.

$H_0 1_b$: There is no statistically significant relationship between financial burdens and confidence that health care needs will be met.

$H_a 1_b$: There is a statistically significant relationship between financial burdens and confidence that health care needs will be met.

To assess RQ1, two correlations were necessary. These two correlations follow the associated hypotheses, focusing on the relationship between financial burden and satisfaction and financial burden and confidence. To test a Pearson correlation with confidence in their statistical validity, the assumption of linearity requires assessment (Pallant, 2007). However, due to the nonparametric nature of the Spearman correlation, this is not a requirement. The Spearman correlation was chosen as appropriate due to the ordinal response categories for both variables in either pair in this analysis. In addition, the use of Spearman correlations would circumvent any validiy concerns based on the distribution of the responses concerning satisfaction or confidence, which appeard to be skewed toward a more positive response (Lehmann, 2006). This is based on the ranking used in Spearman correlations, which takes place in the first stage of analysis and removes any distributional properties of the data by replacing raw values with ranks, as needed for use in this form of correlation. For this reason, there were no assumptions that required assessment, and the analyses could be considered valid regardless of the

distribution of the variables used (Lehmann, 2006). The results of both correlations were significant and positive (satisfaction, $r = .41$, $p < .001$; confidence, $r = .44$, $p < .001$), which indicated that, among those with higher financial burdens, their satisfaction with the Demonstration overall and confidence that their health care needs would be met were both correspondingly higher. Both of these correlations were statistically significant, indicating a great degree of confidence that these correlations were accurate depictions of reality. These findings suggest that those with a higher level of financial burden are not only happier with the Demonstration but left feeling more confident.

Research Question 2

RQ2: What is the relationship between gender, age, and health care finder functionality for accessing quality health care under the Demonstration in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo?

$H_0 2_a$: There is no statistically significant relationship between gender, age, and health care finder functionality access to quality health care in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo.

$H_a 2_a$: There is a statistically significant relationship between gender, age, and health care finder functionality access to health care in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo.

In response to RQ2, I conducted a series of regressions. Because the relationships between the predictors, gender and age, and the dependent variable, health care finder functionality, were in question for each region of the Demonstration, I conducted regression analyses in two stages. In the first stage, I conducted the regression on the

overall data set, and this regression included data from all three locations. By assessing these relationships, I could determine whether there was evidence of a predictive effect of gender or age on health care finder functionality regardless of location.

Prior to analysis, I considered the assumptions of the regression. The first assumption was the absence of multicollinearity. Though not expected due to the nature of the independent variables, I assessed the variance inflation factor between gender and age for any interference in the interpretation of results. A variance inflation factor above 5 is cause for concern and might indicate that the independent variables are too highly related (Tabachnick & Fidell, 2012). This could possibly be the case if too many of one gender were clustered within a specific age group, but it was found not to be problematic, as the variance inflation factor's value was 1.04. The next assumption was normality, which concerns the normality of the distribution of error in the regression. Though the univariate distribution of satisfaction responses regarding healthcare finder functionality was skewed toward a more positive perception, it was important to understand the residual normality as well, as univariate normality is not a direct assumption of the regression analysis (Tabachnick & Fidell). This assumption is typically assessed with a normal *P-P* plot, which should ideally display data points close to a hypothetically perfect diagonal line (Tabachnick & Fidell). As seen in Figure 1, the data points did not follow the ideal line but were not so deviant as to cause concern. However, the assumption test's results indicated that this analysis should still be interpreted with some caution, as the slight deviation may cause the model estimates to be less valid. This deviation may also have been due to the skewed distribution of satisfaction with

healthcare finder functionality. The final assumption is homoscedasticity, which is testable through a standardized residual scatterplot (Stevens, 2016). This plot should not show any notable pattern and is cause for concern when there is apparent funneling. As seen in Figure 2, none such patterning was identified, and the assumption of homoscedasticity was met.

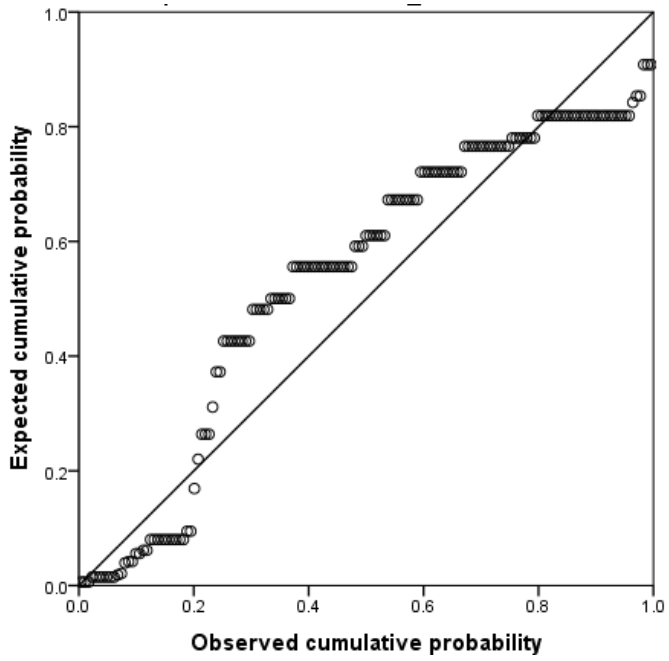

Figure 1. Normal *P-P* plot for overall regression of care finder functionality.

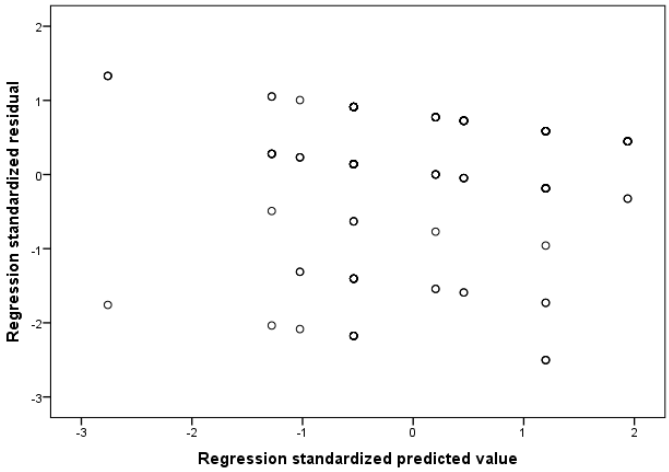

Figure 2. Standardized residual plot for overall regression of care finder functionality.

As the results of assumption testing were questionable, the regression could be conducted with little cause for concern as long as the results could be replicated with an adjusted dependent variable value. To this end, satisfaction with care finder functionality, which was skewed toward a higher satisfaction, was transformed into a dichotomous variable for use in secondary testing. However, the originally proposed regression analysis was conducted first. Results of the originally proposed linear regression indicated a nonsignificant model, $F(2,154) = 2.76$, $p = .067$, $R^2 = .04$, and did not provide evidence that gender or age was significantly predictive of a Demonstration recipient's perception of health care finder functionality. This was confirmed with the findings seen in Table 2, which show that neither predictor was significant, though gender did approach significance. However, as predictors should not be evaluated in a nonsignificant model, these results are not meaningful.

Following the originally proposed model, based on the understanding that the skew in care finder functionality could have been due to acquiescence bias, the satisfaction scale for care finder functionality was transformed into a binary variable where zero represented any response less than very satisfied, and one represented a response of very satisfied. This method of analysis returned similar results, with no evidence for significance between the predictors of gender and age and the dependent variable of satisfaction with care funder functionality ($\chi 2(2) = 5.12$, $p = .077$). These findings confirmed the results of the linear regression, and thus none of the predictor variables required interpretation.

Table 2

Overall Regression of Care Finder Functionality on Gender and Age

Source	*B*	*SE*	β	*t*	*p*
Gender (ref: female)	−0.42	0.22	−0.16	−1.97	0.051
Age	0.18	0.11	0.13	1.66	0.100

In the second stage of analysis for RQ2, I conducted regressions for each region of the Demonstration individually. As a preliminary data assessment, the sample was assessed for subsample sizes in each region. Table 3 shows these subsample sizes and indicates that the Metro Manila subsample was much larger than both the Cavite City and Iloilo City subsamples. Though these subsample sizes were not all-sufficient for the regression analyses, they were conducted for completeness and based on the possibility that effect sizes of predictive relationships within a subsample were so strong that they lowered the required effect size to achieve significance.

Table 3

Phases of Philippine Demonstration Represented in the Data Set

Phase	*n*	%
Phase 1: Metro Manila	109	60.6
Phase 2: Cavite City, Cavite	39	21.7
Phase 3: Iloilo City, Iloilo	12	6.7
No data	20	11.1

As with the preliminary regression, assumptions were assessed for each individual model for the three regions. Variance inflation factors for each regression were acceptable, with a value of 1.03 for the regression conducted on Phase 1, 1.11 for Phase 2, and 1.15 for Phase 3; these values indicated that multicollinearity was not problematic for any subsample. Normal *P-P* plots, seen in Figures 3, 4, and 5, were similar to the first regression's assumption plot within the Metro Manila regression but deviated more from the ideal normal distribution within the Cavite City and Iloilo City subsamples. These are likely artifacts of the small sample sizes (Cohen, 1988) and cannot be adequately corrected with transformations or nonparametric analyses, which would require much larger sample sizes to detect significance. In contrast to these findings, homoscedasticity was not problematic, as the standardized residual scatterplots within Figures 3 and 4 were satisfactory. However, homoscedasticity could not be assumed for the subsample of Iloilo City, though this was again a likely result of the small sample size. Though these limitations should be noted, the regression analyses were continued for completeness and to explore any possible patterns within the data. However, in addition to these analyses, a second series of binary logistic regressions were conducted in an effort to better understand the results and determine whether they could be confirmed or denied through subsequent testing. This testing took place similarly to the regression of satisfaction with care finder functionality, with the use of a dependent variable transformed such that zero represented any response less than very satisfied, and one represented a response of very satisfied. The binary nature of this variable both addressed the possibility of acquiescence bias and the non-normal distribution of residuals for each analysis.

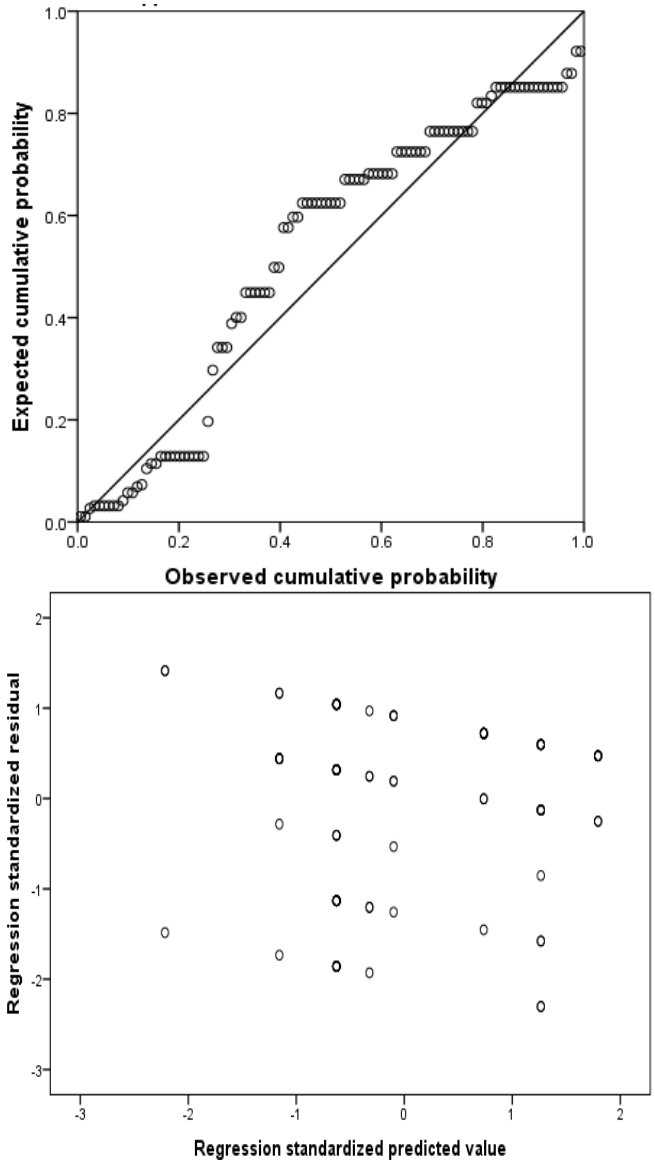

Figure 3. Normality and standardized residual scatterplots for Metro Manila.

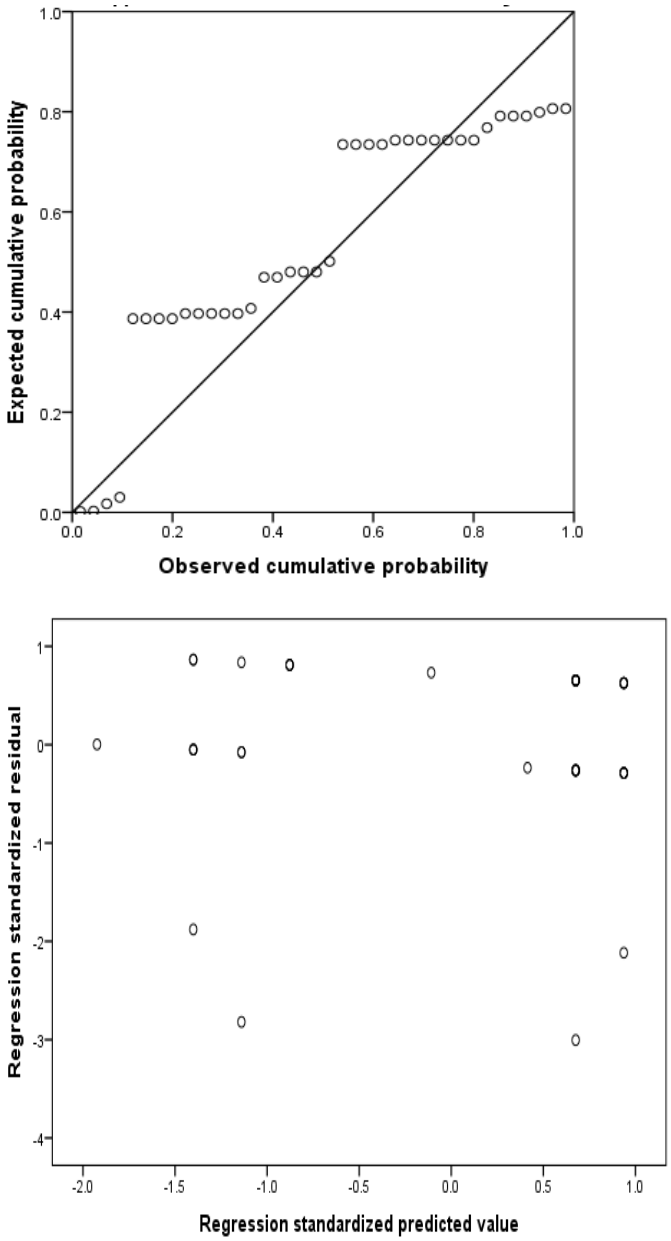

Figure 4. Normality and standardized residual scatterplots for Cavite City.

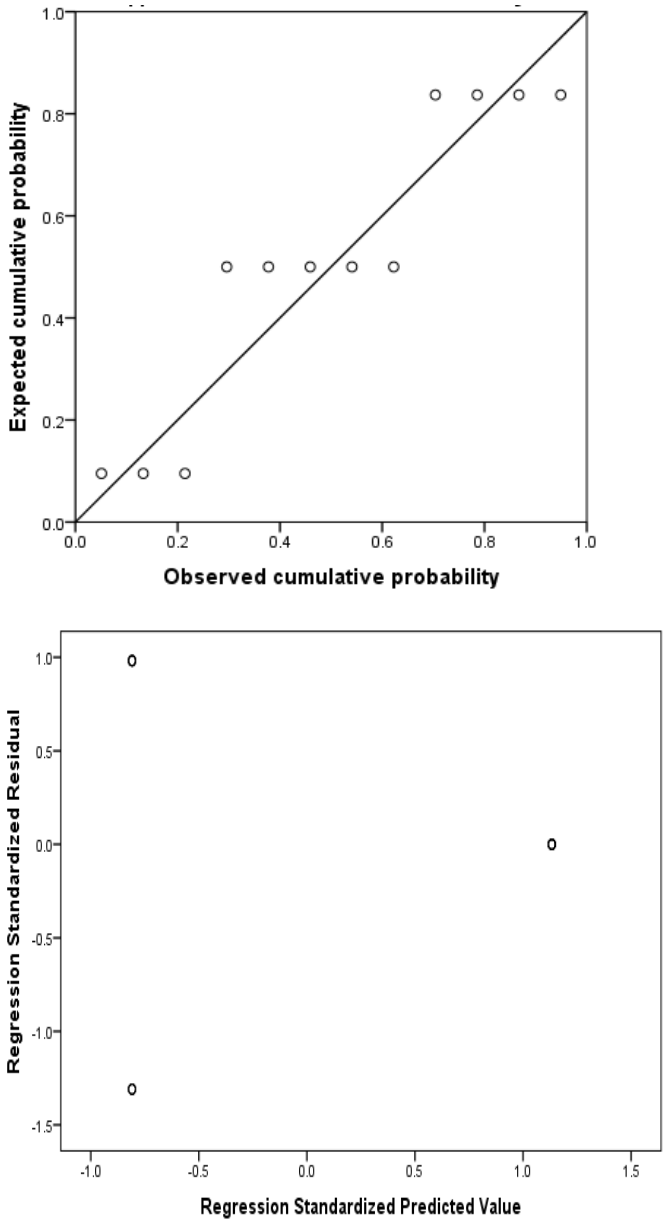

Figure 5. Normality and standardized residual scatterplots for Iloilo City.

Metro Manila. Results of the first regression were not significant but did approach significance, $F(2,104) = 2.93$, $p = .058$, $R^2 = .05$, suggesting that there is a possibility for relationships between the independent variables of gender and age and the dependent variable of health care finder functionality within the Metro Manila subsample. Again, these findings were not significant, and should not be considered for interpretation, but they were still examined in an exploratory manner. Assessment of the individual predictors showed that the only potential influence resulted from Demonstration recipients' gender. Though these predictors should not be interpreted due to the overall regression results, there is some evidence that male Demonstration recipients were less satisfied with the health care finder functionality, $p = .027$, $B = -.61$, and were .61 units less satisfied on average. No effects were evident from the age variable. Results of a secondary analysis through binary logistic regression confirmed this lack of significance ($\chi 2(2) = 4.44$, $p = .109$), and suggested that the nonsignificant findings were not likely due to the influenced of nonnormality or acquiescence bias.

Cavite City. Results from the second regression were also nonsignificant, $F(2, 35) = 0.19$, $p = .827$, $R^2 = .01$, suggesting that there was no evidence for a relationship between the independent variables of gender and age and the dependent variable of care finder functionality. Further assessment of the predictor variables supported this lack of significance. Results of a secondary analysis through binary logistic regression confirmed this lack of significance ($\chi 2(2) = 0.68$, $p = .712$), and suggested that the nonsignificant findings were not likely due to the influenced of nonnormality or acquiescence bias. However, it is possible that these findings were due to the smaller than ideal sample size.

Iloilo City. Results from the third regression were also nonsignificant, $F(2,9) = 1.41$, $p = .294$, $R^2 = .24$, suggesting that there was no evidence for a relationship between the independent variables of gender and age and the dependent variable of care finder functionality. Further assessment of the predictor variables supported this lack of significance. Results of a secondary analysis through binary logistic regression confirmed this lack of significance ($\chi 2(2) = 3.94$, $p = .140$), and suggested that the nonsignificant findings were not likely due to the influenced of nonnormality or acquiescence bias. However, as with the regression of Cavite City, it is possible that these findings were due to the smaller than ideal sample size, which was 12 for this regression. Results of these three subsample regressions can be found in Table 4.

Table 4

Individual Regressions of Care Finder Functionality for each Phase of Demonstration

Source	*B*	*SE*	β	*t*	*p*
Phase 1: Metro Manila					
Gender (ref: female)	−0.61	0.27	−0.22	−2.24	0.027
Age	0.17	0.14	0.12	1.27	0.207
Phase 2: Cavite City, Cavite					
Gender (ref: female)	0.20	0.39	0.09	0.52	0.605
Age	0.03	0.19	0.03	0.15	0.879
Phase 3: Iloilo City, Iloilo					
Gender (ref: female)	−0.43	0.27	−0.49	−1.57	0.152
Age	0.00	0.49	0.00	0.00	0.999

As a follow-up to the regressions conducted to determine the combined predictive effect of gender and age on health care finder functionality, a final regression was conducted to examine the effect of these independent variables on satisfaction with submission of a waiver to request to see a nonapproved provider in a designated Demonstration location. Within the data set, a total of 33 Demonstration recipients had requested a waiver and were the only participants to provide data regarding their satisfaction with this process. Out of these 33, 29 also had data available regarding their age and gender, which was necessary for use in the regression. These were the only participants who provided input on the process of submitting such a waiver and were the only participants used in the regression of waiver submission satisfaction.

Assumption testing again started with an assessment of multicollinearity for this subsample of 29. With a variance inflation factor value of 1.19, the assumption was met. As seen in Figure 6, normality slightly deviated from the perfect normal line, which could be cause for concern when interpreting the results. The residual scatterplot (see Figure 7) revealed two clusters of responses on the outcome variable, satisfaction with request for a waiver, though the two clusters were similarly sized and did not indicate problems with homoscedasticity. The results should nonetheless be considered with caution, as the normality was questionable and the sample size was not ideal. For this reason, in addition to these analyses, a binary logistic regressions was conducted in an effort to better understand the results. This testing took place with the use of a dependent variable transformed such that zero represented any response less than very satisfied, and one

represented a response of very satisfied. The binary nature of this variable both addressed the possibility of acquiescence bias and the non-normal distribution of residuals.

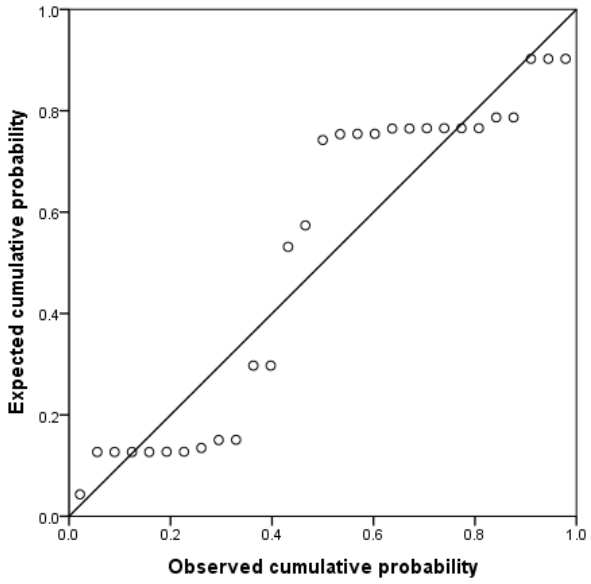

Figure 6. Normal *P-P* plot for regression satisfaction with waiver.

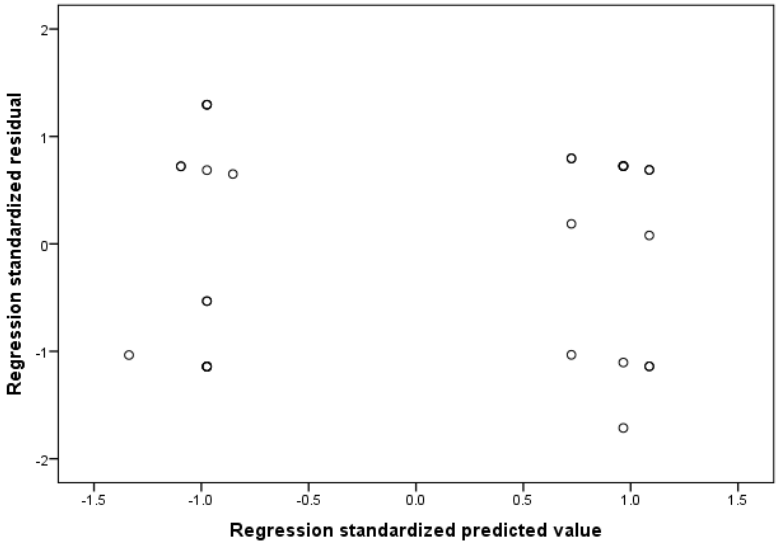

Figure 7. Standardized residual plot for regression of satisfaction with waiver.

Results of this final regression were also nonsignificant, $F(2,26) = 1.22$, $p = .313$, $R^2 = .09$, and provided no evidence for a relationship between a Demonstration recipient's gender or age and his or her satisfaction with request for a waiver. Subsequent testing through a binary logistic regression provided similar results ($\chi 2(2) = 2.75$, p = .253), indicating no evidence for a relationship between the predictors of gender and age and the outcome of satisfaction with the request for a waiver. Because these results were not significant, the individual predictors should not be examined further; however, a quick visual assessment of the two predictors confirms the overall findings. These results can be found in Table 5.

Table 5

Regression of Satisfaction With Waiver on Gender and Age

Source	*B*	*SE*	β	*t*	*p*
Gender (ref: female)	−0.99	0.67	−0.31	−1.50	0.147
Age	0.06	0.29	0.04	0.20	0.844

Research Question 3

RQ3: What is the relationship between a closed network, actual beneficiary out-of-pocket cost, and quality health care in Demonstration areas?

$H_0 3_a$: There is no statistically significant relationship between actual beneficiary cost and a closed provider network.

$H_o 3_a$: There is a statistically significant relationship between actual beneficiary out-of-pocket cost and a closed provider network.

$H_0 3_b$: There is no statistically significant relationship between quality health care and a closed provider network.

$H_a 3_b$: There is a statistically significant relationship between quality health care and a closed provider network.

To examine RQ3, three questions from the survey were chosen as representations of the beneficiary out-of-pocket costs and quality health care. The first question asked participants to rate their out-of-pocket costs in relation to those same costs prior to the Demonstration. As seen in Table 6, most felt that their costs were either higher now (36.1%) or about the same (35.6%), with a minority reporting lower costs following the Demonstration (10.0%). To examine the quality of health care, participants were asked to rate their satisfaction on a scale from 0 to 10. As seen in Table 6, many responded with a score of 5 or above. Finally, participants were asked to compare their current experience with receiving health care to their experience before, and the two largest response groups consisted of those who felt their experience was about the same (28.9%) or much better (29.4%). However, to test whether these responses were significantly higher or lower than their mid-level response categories, a series of one-sample *t*-tests was conducted.

Table 6

Responses to Questions Regarding Beneficiary Cost and Quality Health Care

Response	*n*	%
Out-of-pocket expenses following Demonstration		
Higher now	65	36.1
About the same now	64	35.6
Lower now	18	10.0
No response	33	18.3
Rating of satisfaction with health care quality where 0 is worse and 10 is best possible		
0	9	5.0
1	3	1.7
2	4	2.2
3	4	2.2
4	8	4.4
5	14	7.8
6	9	5.0
7	27	15.0
8	47	26.1
9	24	13.3
10	30	16.7
No response	1	0.6
Comparison of current experience receiving healthcare before Demonstration		
(1) Much worse	21	11.7
(2) Somewhat worse	17	9.4
(3) About the same	52	28.9
(4) Somewhat better	19	10.6
(5) Much better	53	29.4
No response	18	10.0

Each of these three questions was first assessed to determine which response category would take the role of comparison value. For out-of-pocket expenses, the category of *about the same now* was chosen, and results would thus indicate whether participants responded with a significantly higher or lower value on average. Similarly, the rating of 5 was chosen for the rating between 1 and 10, as this indicated a middle response, and testing would thus indicate whether participants responded significantly higher or lower than the objective middle category. For the last question, which asked participants to compare their experience receiving health care before and after the Demonstration, the category of *about the same* was chosen, as results would thus indicate whether participants tended to respond close to the *much worse* or *much better* anchor of the scale. Examination of the distribution for responses to all three of these items indicated no evidence of acquiescence bias or skewed distributions, suggesting that there was no need for a binary transformation, and that t tests would be the best suited method for statistical analysis.

Results for all three tests were significant, indicating that participant responses tended to be significantly different from their middle response categories. The responses to out-of-pocket expenses compared to a value of 2, or about the same were significant at the $p < .001$ level, $t(146) = -5.68$. Examination of the mean difference showed that participants tended to respond that the expenses were higher now with a frequency more common than would be expected at random. However, the satisfaction value with response categories ranging from 0 to 10 also consisted of responses significantly different from the middle response of 5. This difference was also significant at the $p <$

.001 level, $t(178) = 15.27$. Results of this analysis showed that the Demonstration recipients tended to respond an average of 3.04 units higher than the middle response of 5, suggesting that they responded significantly closer to the *best possible* anchor of the satisfaction scale. Finally, the comparison of satisfaction from before to after the Demonstration was also significant at the $p < .001$ level, $t(162) = 3.77$. Examination of the mean difference between the sample's responses and the response of *about the same* showed that participants responded significantly higher, or closer to the *much better* anchor of this scale. See Table 7.

Table 7

One-Sample t *Tests for Expenses and Satisfaction Following Demonstration*

Variable	*t* (*df*)	*p*	Mean difference
Out-of-pocket expenses	−5.68 (146)	<0.001	−0.32
Satisfaction (0–10)	15.27 (178)	<0.001	3.04
Satisfaction compared to predemonstration	3.77 (162)	<0.001	0.41

Beneficiary Actual Out-of-Pocket Costs

How much were the actual out-of-pocket costs for beneficiaries for calendar years (CYs) 2011, 2012, 2013, 2014, and 2015 in Metro Manila, Cavite City, Cavite, and Iloilo, Iloilo? Prior to the Philippine Demonstration, beneficiaries paid a deductible and cost share plus balance billing. After the implementation of the Philippine Demonstration, beneficiaries paid a deductible and cost share. There is an assumption that beneficiaries' overall out-of-pocket costs would increase initially because greater than half the TRICARE beneficiaries were not using the TRICARE benefit. As more beneficiaries use

the TRICARE benefit and receive care from approved Demonstration providers, their costs should eventually show a decrease.

To evaluate beneficiary actual out-of-pocket costs, an analysis of claims data from January 1, 2011, through December 31, 2015, was conducted to assess the impact of the Philippine Demonstration on beneficiary financial burden comparing beneficiary out-of-pocket cost prior to the Philippine Demonstration and during the Philippine Demonstration. All numbers for the analysis were rounded, less than .50 were rounded down, and .50 and higher were rounded up.

The analysis was based on CYs January 1, 2011, through December 31, 2015. This analysis was based on Phase 1 Metro Manila and its surrounding areas, Phase 2 Cavite City, Cavite, and Phase 3, Iloilo City, Iloilo. An analysis of the claims data from January 1, 2011, through December 31, 2012, used the same locations selected for the Philippine Demonstration and analyzed using special processing codes: Special Processing Code 1, Special Processing Code 2, Special Processing Code 3, and Special Processing Code 4. To protect the identities of TRICARE beneficiaries, the 18 categories of HIPAA identifiers were removed. Therefore all personally identifiable information was removed from the claims data.

Inpatient Beneficiary Out-of-Pocket Costs

Table 8 and Figure 8 show the grand total for inpatient beneficiary out-of-pocket costs using all special processing codes for CY 2011 as $147, 320, CY 2012 as $143, 682, CY 2013 as $140, 224, CY 2014 as $223, 820, and CY 2015 as $231,506. A closer examination of the inpatient beneficiary out-of-pocket costs for Phase I for Metro Manila

shows beneficiaries out-of-pocket costs for CY 2011 as $133,510, CY 2012 as $133,276, CY 2013 as $133,192, CY 2014 as $196,199, and CY 2015 as $195,521. Phase 2 for Cavite City, Cavite, shows beneficiaries' out-of-pocket costs for CY 2011 as $5,440, CY 2012 as $5,672, CY 2013 as $1,347, CY 2014 as $6,626, and CY 2015 as $8,386. Phase 3 for Iloilo City, Iloilo, shows beneficiaries' out-of-pocket costs for CY 2011 as $8,371, CY 2012 as $4,733, CY 2013 as $5,684, CY 2014 as $20,995, and CY 2015 as $27,598.

Table 8

Inpatient Beneficiary Out-of-Pocket Costs All Special Processing Code

Demo city/phase	CY2011	CY2012	CY2013	CY2014	CY2015
PH1	$133,510	$133,276	$133,192	$196,199	$195,521
PH2	$5,440	$5,672	$1,347	$6,626	$8,386
PH3	$8,371	$4,733	$5,684	$20,995	$27,598
Grand total	$147,320	$143,682	$140,224	$223,820	$231,506

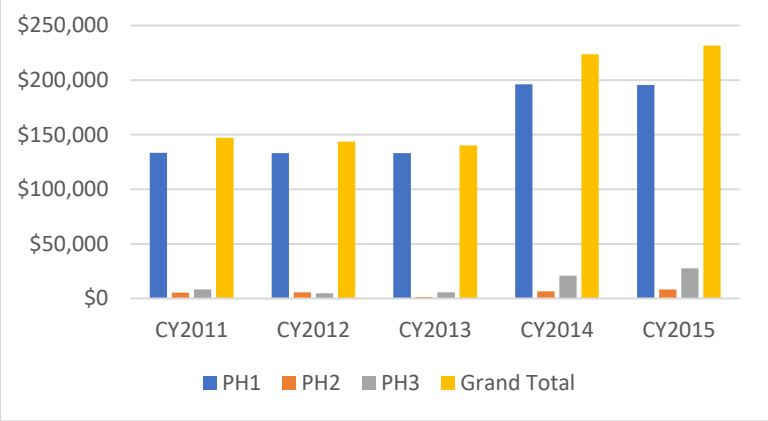

Figure 8. Inpatient beneficiary out-of-pocket costs all special processing code.

Table 9 and Figure 9 show the grand total for inpatient beneficiary out-of-pocket costs for using Special Processing Code PH for CY 2011 as $0, CY 2012 as $0, CY 2013 as $65,529, CY 2014 as $172,507, and CY 2015 as $184,158. For Table 9, the dollar value for CY 2011 and CY 2012 will not be discussed because the Demonstration had not commenced and claims were not processed using Special Processing Code PH. Phase I for Metro Manila shows beneficiaries' out-of-pocket costs for CY 2013 as $63,911, CY 2014 as $149,911, and CY 2015 as $149,014. Phase 2 for Cavite City, Cavite, shows beneficiaries' out-of-pocket costs for CY 2013 as $196, CY 2014 as $6,162, and CY 2015 as $8,103. Phase 3 for Iloilo, Iloilo, shows beneficiaries' out-of-pocket costs for CY 2013 as $1,422, CY 2014 as $16,435, and CY 2015 as $27,041.

Table 9

Inpatient Beneficiary Out-of-Pocket Costs With Special Processing Code PH

Demo city/phase	CY2011	CY2012	CY2013	CY2014	CY2015
PH1	$0	$0	$63,911	$149,911	$149,014
PH2	$0	$0	$196	$6,162	$8,103
PH3	$0	$0	$1,422	$16,435	$27,041
Grand total	$0	$0	$65,529	$172,507	$184,158

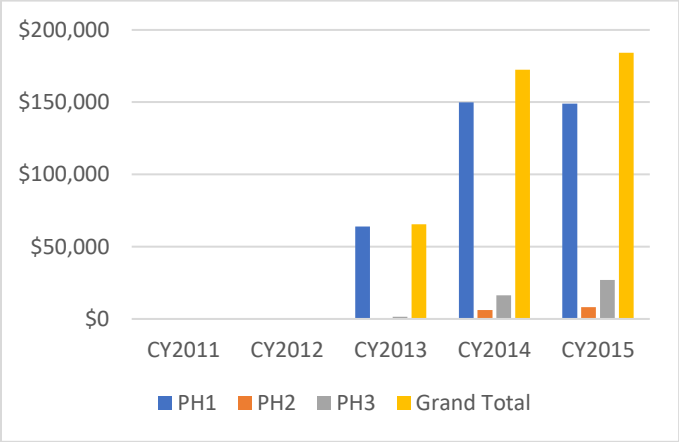

Figure 9. Inpatient beneficiary out-of-pocket costs with Special Processing Code PH.

Table 10 and Figure 10 show the difference between Table 8 and Table 9 for inpatient beneficiary out-of-pocket costs, keeping in mind there is no difference for CY 2011 and CY 2012 because the Philippine Demonstration had not been implemented. Thus the grand total for inpatient beneficiary out-of-pocket costs difference for CY 2013 is $74,695, CY 2014 is $51,312, and CY 2015 is $47,347. Phase 1 for Metro Manila shows a difference for inpatient beneficiary out-of-pocket costs for CY 2013 as $133,192, CY 2014 as $196,199, and CY 2015 as $195,521. Phase 2 for Cavite City, Cavite, difference in out-of-pocket costs for CY 2013 is $1,152, CY 2014 is $464, and CY 2015 is $283. Phase 3 for Iloilo City, Iloilo, difference in out-of-pocket costs for CY 2013 is $4,262, CY 2014 is $4,560, and CY 2015 is $557.

Table 10

Difference of Inpatient Beneficiary Out-of-Pocket Cost for Table 8 and Table 9

Demo city/phase	CY2011	CY2012	CY2013	CY2014	CY2015
PH1	$133,510	$133,276	$69,282	$46,288	$46,507
PH2	$5,440	$5,672	$1,152	$464	$283
PH3	$8,371	$4,733	$4,262	$4,560	$557
Grand total	$147,320	$143,682	$74,695	$51,312	$47,347

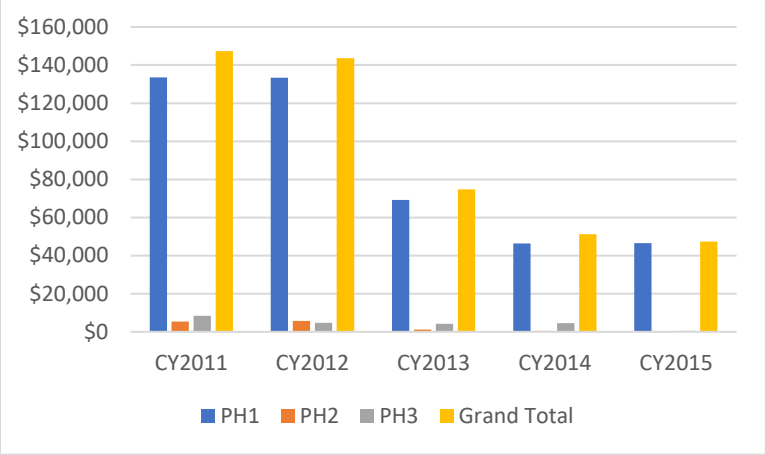

Figure 10. Difference of inpatient beneficiary out-of-pocket cost for Table 8 and Table 9.

Outpatient Beneficiary Out-of-Pocket Costs

Table 11 and Figure 11 show the grand total for outpatient beneficiary out-of-pocket costs using all special processing codes for CY 2011 as $368,029, CY 2012 as $232,041, CY 2013 as $187,933, CY 2014 as $197,438, and CY 2015 as $218,544. An examination of the outpatient beneficiary out-of-pocket costs for Phase 1 for Metro Manila shows beneficiaries' out-of-pocket costs for CY 2011 as $211,087, CY 2012 as

$169,253, CY 2013 as $130,576, CY 2014 as $154,243, and CY 2015 as $175,780. Phase 2 for Cavite City, Cavite, shows beneficiaries' out-of-pocket costs for CY 2011 as $144,960, CY 2012 as $45,562, CY 2013 as $37,870, CY 2014 as $15,286, and CY 2015 as $15,025. Phase 3 for Iloilo City, Iloilo, shows beneficiaries out-of-pocket costs for CY 2011 as $11,983, CY 22012 as $17,225, CY 2013 as $19,487, CY 2014 as $27,909, and CY 2015 as $27,740.

Table 11

Outpatient Beneficiary Out-of-Pocket Costs Including Special Processing Code PH

Demo city/phase	CY2011	CY2012	CY2013	CY2014	CY2015
PH1	$211,087	$169,253	$130,576	$154,243	$175,780
PH2	$144,960	$45,562	$37,870	$15,286	$15,025
PH3	$11,983	$17,225	$19,487	$27,909	$27,740
Grand total	$368,029	$232,041	$187,933	$197,438	$218,544

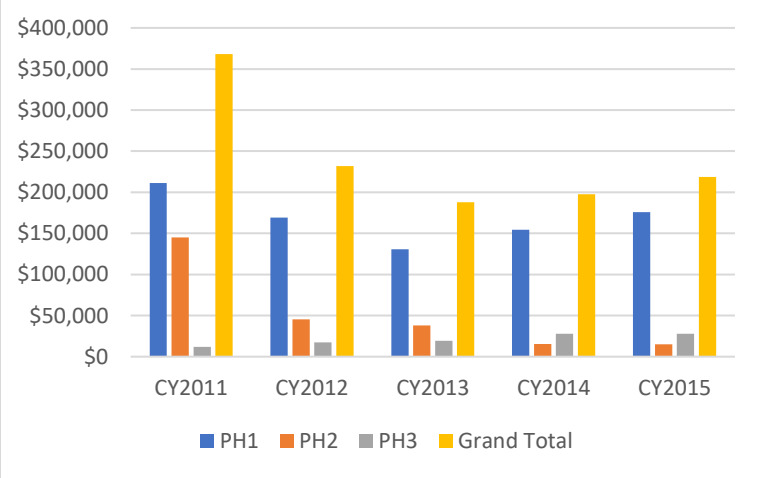

Figure 11. Outpatient beneficiary out-of-pocket costs including special processing code.

Table 12 and Figure 12 show the grand total for outpatient beneficiary out-of-pocket costs for using Special Processing Code PH for CY 2011 as $0, CY 2012 as $0, CY 2013 as $91,521, CY 2014 as $157,590, and CY 2015 as $192,797. For Table 12, the dollar value for CY 2011 and CY 2012 will not be discussed because the Demonstration had not commenced and claims were not processed using Special Processing Code PH. Phase 1 for Metro Manila shows beneficiaries' out-of-pocket costs for CY 2013 as $89,100, CY 2014 as $127,467, and CY 2015 as $152,897. Phase 2 for Cavite City, Cavite, shows beneficiaries' out-of-pocket costs for CY 2013 as $992, CY 2014 as $13,541, and CY 2015 as $14,173. Phase 3 for Iloilo City, Iloilo, shows beneficiaries' out-of-pocket costs for CY 2013 as $1429, CY 2014 as $16,581, and CY 2015 as $25,727.

Table 12

Outpatient Beneficiary Out-of-Pocket Costs With Special Processing Code PH

Demo city/phase	CY2011	CY2012	CY2013	CY2014	CY2015
PH1	$0	$0	$89,100	$127,467	$152,897
PH2	$0	$0	$992	$13,541	$14,173
PH3	$0	$0	$1,429	$16,581	$25,727
Grand total	$0	$0	$91,521	$157,590	$192,797

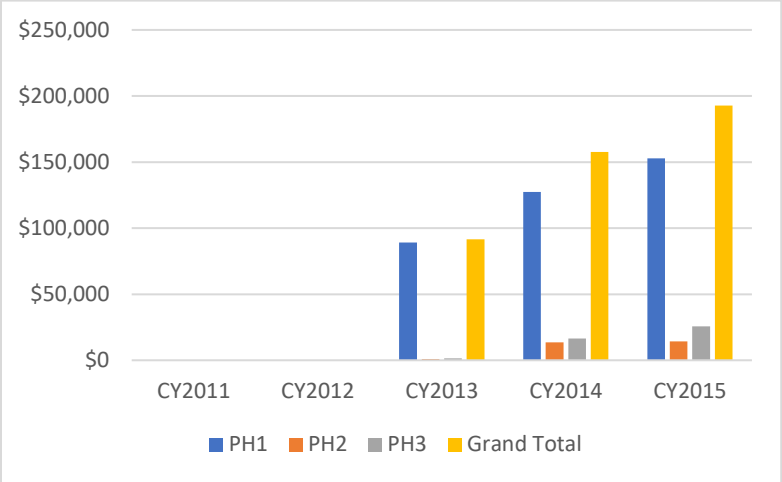

Figure 12. Outpatient beneficiary out-of-pocket costs with Special Processing Code PH.

Table 13 and Figure 13 show the difference between Table 11 and Table 12 for outpatient beneficiary out-of-pocket costs, keeping in mind there is no difference for CY 2011 and CY 2012 because the Philippine Demonstration had not been implemented. Thus the grand total for inpatient beneficiary out-of-pocket costs difference for CY 2013 is $96,412, CY 2014 is $39,848, and CY 2015 is $23,747. Phase 1 for Metro Manila shows a difference for inpatient beneficiary out-of-pocket costs for CY 2013 as $41,476, CY 2014 as $26,775, and CY 2015 as $22,882. Phase 2 for Cavite City, Cavite, difference in out-of-pocket costs for CY 2013 is $36,879, CY 2014 is $41,745, and CY 2015 is $852. Phase 3 for Iloilo City, Iloilo, difference in out-of-pocket costs for CY 2013 is $18,058, CY 2014 is $11,328, and CY 2015 is $2,013.

Table 13

Difference of Outpatient Beneficiary Out-of-Pocket Cost

Demo city/phase	CY2011	CY2012	CY2013	CY2014	CY2015
PH1	$211,087	$169,253	$41,476	$26,775	$22,882
PH2	$144,960	$45,562	$36,879	$1,745	$852
PH3	$11,983	$17,225	$18,058	$11,328	$2,013
Grand total	$368,029	$232,041	$96,412	$39,848	$25,747

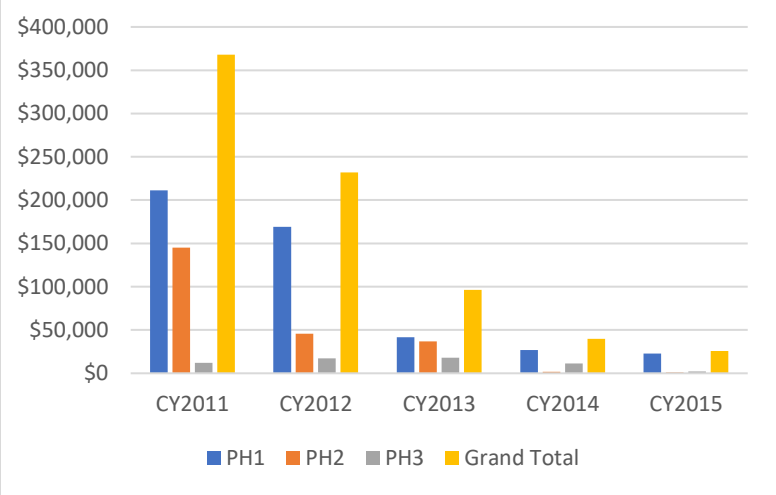

Figure 13. Difference of outpatient beneficiary out-of-pocket cost.

Summary

Chapter 4 contained the statistical findings resulting from an examination of the survey responses from Metro Manila, Cavite, and Iloilo. The findings centered on three RQs and an analysis of claims data organized as such. Results of the three RQs provided evidence for a positive relationship between Demonstration recipients' financial burdens

and satisfaction with the Demonstration as well as their confidence that their health care needs would be met. However, when assessing age and gender, there was little evidence to suggest that Demonstration recipients had different opinions of the health care finder functionality or satisfaction requesting a waiver based on their age or gender. Conversely, this indicated that men and women of all ages were similarly satisfied with the health care finder functionality and ability to receive a waiver to contact a nonapproved Demonstration provider. The results also showed that participants were highly satisfied with the Demonstration overall and were much more satisfied with their health care following the Demonstration. However, these same participants also felt that their out-of-pocket expenses were higher than before the Demonstration. An analysis of the claims data for the beneficiary out-of-pocket costs for inpatient and outpatient care showed that the beneficiaries' out-of-pocket costs increased in demonstration areas and decreased in non-demonstration areas; thus, indicating a preference for a closed network. In Chapter 5, these findings will be explored in terms of what is already known, compared to my expectations, and assessed for interpretation and suggestions for further research.

Chapter 5: Discussion, Conclusion, and Recommendations

Introduction

The aim of this research was to examine the efficacy and acceptability of employing an alternative method for the delivery of health care by increasing access and reducing beneficiary out-of-pocket costs while maintaining quality health care. The DHA implemented a closed network under the DoD TRICARE Philippine Demonstration. Eligible beneficiaries for the Demonstration—TOP Standard beneficiaries, consisting of retirees and their family members, TRICARE for Life, family members of active service members, and TYA, Reservist, and National Guard who resided in the Philippines—received care in the designated demonstration areas and used approved Demonstration providers. Through this research I evaluated the following Demonstration areas: Metro Manila and its surrounding areas of Cavite City, Cavite, and Iloilo City, Iloilo.

Interpretation of the Findings

The results of the study show that that men and women of all ages were similarly satisfied with the health care finder functionality and ability to receive a waiver to receive health care from a nonapproved Demonstration provider. However, these same participants also felt that their out-of-pocket expenses were higher than before the Demonstration.

According to Andersen et al. (2010) and Andersen and Newman (1973/2005), an individual's age and gender could play a role in the propensity for accessing health services. However, when assessing the correlation of age and gender for the Demonstration in Metro Manila, Cavite City, Cavite, and Iloilo City, Iloilo, there was

little evidence to suggest that Demonstration recipients had different opinions of health care finder functionality or satisfaction requesting a waiver based on their age or gender. Conversely, this indicated that men and women of all ages were similarly satisfied with the health care finder functionality and ability to obtain a waiver to receive health care from a nonapproved Demonstration provider.

The results also showed that participants were highly satisfied with the Demonstration overall and were much more satisfied with their health care following the implementation of the Philippine Demonstration. However, these same participants also felt that their out-of-pocket expenses were higher than before the Demonstration. Interestingly, an analysis of beneficiaries' out-of-pocket costs for inpatient and outpatient health care services for CYs 2011 and 2012 showed that beneficiaries' out-of-pocket costs were higher in the years before the Philippine Demonstration. After the implementation of the Philippine Demonstration, beneficiaries' out-of-pocket costs for inpatient and outpatient health care services decreased for CYs 2013, 2014, and 2015.

Beneficiaries' actual out-of-pocket costs based on inpatient and outpatient claims data January 1, 2011, through December 31, 2015, showed a decrease in the amount beneficiaries paid out-of-pocket in Metro Manila and its surrounding areas, Cavite City, Cavite, and Iloilo City, Iloilo to providers not accepting TRICARE. Before the Philippine Demonstration, the providers in the Philippines did not accept what TRICARE reimbursed, which subjected beneficiaries to balance billing. Beneficiaries' out-of-pocket costs collectively were $147,320 (CY 2011) and $143,682 (CY 2012) for inpatient

services, shown in Table 8, and $368,029 (CY 2011) and $232,041 (CY 2012) for outpatient services, shown in Table 11.

Schoen et al. (2010) argued that the design of the insurance plan influenced access to medical care and costs. Upon implementation of the Philippine Demonstration, the approved Demonstration providers agreed to accept the TRICARE reimbursement as payment in full, eliminating balance billing for beneficiaries. After implementing the Philippine Demonstration, beneficiaries' out-of-pocket costs collectively were $65,529 (CY 2013), $172,507 (CY 2014), and $184,158 (CY 2015) for inpatient costs, as seen in Table 9, and $91,521 (CY 2013), $157,590 (CY 2014), and $192,797 (CY 2015) for outpatient costs, as seen in Table 12. Beneficiaries who chose not to receive care from approved Demonstration providers' out-of-pocket costs collectively were $74,695 (CY 2013), $51,312 (CY 2014), and $47,347 (CY 2015) for inpatient services, as depicted in Table 10, and $96,412 (CY 2013), $39,848 (CY 2014), and $25,747 (CY 2015) for outpatient services, as depicted in Table 13. Table 12 and Table 13 are rather revealing in a few ways. These results are indicative that the beneficiaries' out-of-pocket costs actually decreased. Andersen and Newman (1973/2005) predicted that access to health care would increase if the patient out-of-pocket expenses decreased. As the Philippine Demonstration matured, more beneficiaries started accessing care from approved Demonstration providers, indicating the efficacy and acceptability of a closed network changing the health care model for delivering care and for reimbursement methodology.

Limitations of the Study

In reviewing the literature, there was no research found that integrated the MHS with a foreign health care system to create an alternative for providing health care. This research was limited to the patient experience. As previously mentioned, based on claims data, out of approximately 10,000 TRICARE Standard beneficiaries living in the Philippines, only 4,909 beneficiaries used the TOP Standard option before implementing the Philippine Demonstration. The predisposing factors used to evaluate the Philippine Demonstration were limited to age, gender, and location. The beneficiary categories were collapsed so the TOP Standard categories or options could not be determined, rendering it hard to decide which beneficiary category was receiving the most care. Additionally, it was impossible to determine the number of beneficiaries accessing their TRICARE benefit under the Philippine Demonstration as well as the beneficiary category.

Recommendations

Further research should be done to determine the full effects of the Philippine Demonstration, evaluating the impact of predisposing factors for TOP Standard beneficiaries accessing health care and trending actual health care expenditures paid by the DoD, beneficiaries, and other health insurance. It should promote wellness programs for TOP Standard beneficiaries that would result in better health outcomes. An approach to the study from the perspective of the providers could also prove beneficial.

Implications for Positive Social Change

The TRICARE beneficiaries in the Philippines experienced a positive social change at the individual level after effectively blending the MHS and the Philippines

health care system, which created a closed network, resulting in decreased out-of-pocket costs and increased access to quality health care. The contractor responsible for administering the Philippine Demonstration recruited providers who agreed to accept what TRICARE reimbursed, which included the beneficiary's deductible and cost share as payment in full, alleviating balance billing. Furthermore, the providers agreed to undergo a stringent credentialing process that assured providers provided quality health care. This research has promising implications for the DoD and beneficiaries who live and receive health care overseas. There is a high probability that health care expenditures could decrease for the DoD and beneficiaries.

Positive social change for increasing access to quality health care and decreased out-of-pocket costs can be accomplished when the DHA implements a closed network of providers throughout various countries outside the continental United States, whereby beneficiaries are not subjected to balance billing and have access to providers who provide quality health care and accept what TRICARE reimburses as full payment. Regardless of the balance billing law, the standards for health care, and access to numerous providers in the United States, military retirees and their family members and family members of active service members are subjected to higher out-of-pocket costs and decreased access to quality health care in countries outside the United States. Therefore, the DHA's role in social change is to develop a strategy and legislation to decrease out-of-pocket costs and increase access to quality health care for integrating the MHS with foreign health care systems. Socializing this thought process will take time to effectuate social change worldwide.

Conclusion

In conclusion, the results of the three RQs provide evidence of a positive relationship between Demonstration recipients' financial burdens and satisfaction with the Demonstration as well as their confidence that their health care needs would be met under the Philippine Demonstration. Although some beneficiaries believed that their out-of-pocket costs increased, an actual analysis of the claims data showed a decrease in beneficiaries' out-of-pocket costs. Therefore, a closed network of approved Demonstration providers proved to be beneficial for increasing access to quality health care while decreasing beneficiary out-of-pocket costs.

References

Aday, L. A., & Andersen, R. M. (1974). A framework for the study of access to medical care. *Health Services Research, 9,* 208–220. Retrieved from http://www.ncbi.nlm.nih.gov/

Aday, L. A., & Awe, W. C. (1997). Health sources utilization models. In D. S. Gochman (Ed.), *Handbook of health behavior research I: Personal and social determinants* (1st ed., pp. 153-172). New York, NY: Springer. Retrieved from http://google.book.com

Anderson, M. E., Hosek, S. D., & Bloomfield, E. S. (1994). Evaluation of the CHAMPUS reform initiative: Volume 6, implementation and operations. Santa Monica, CA: RAND Corporation. http://www.rand.org/pubs/reports/R4244z6.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior, 36*(1), 1–10. https://doi.org/10.2307/2137284

Andersen, R. M. (2008). National health surveys and the behavioral model of health services use. *Medical Care, 46,* 647–53. https://doi.org/10.1097/mlr.0b013e31817a835d

Andersen, R. M., Davidson, P. L., & Baumeister ( ) Improving access to care. In G. F. Kominski (Ed.) *Changing the U.S. health care system: Key issues in health services policy and management* (4th ed., pp, 33-65), San Francisco, CA: Jossey-Bass

Andersen, R. M & Newman, J. F. (2005). Societal and individual determinants of medical care utilization in the United States. (Reprinted from *Milbank Memorial Fund Quarterly: Health and Society, 51*(1), 95–124). doi.org/10.1111/j.1468-0009.2005.00428.xBarton, P. L. (2007). *Understanding the U.S. health services systems* (3rd ed.). Chicago, IL: Health Administration Press.

Bodenheimer, T (2005a) High and rising health care costs. Part 1: Seeking an explanation. *Ann Intern Med., 142*(10), 847–854. doi:10.7326/0003-4819-142-10-200505170-00010

Bodenheimer, T (2005b) High and rising health care costs. Part 2: Technologic innovation. *Ann Intern Med., 142*(11), 932-937. doi:10.7326/0003-4819-142-11-200506070-00012

Bodenheimer, T. (2005c) High and rising health care costs. Part 3: The role of health care providers. *Ann Intern Med., 142*(12_Part_1), 996-1002. doi:10.7326/0003-4819-142-12_Part_1-200506210-00009

Bowling, A. (2010) *Research methods in health: Investigating Health and Health Services.* (3rd ed.). New York, NY: McGraw Hill.

Carey, A. F. (2011). *Improvements needed in procedures for certifying medical providers and processing and paying medical claims in the Philippines* (Report No. D-2011-07). Arlington, VA: Department of Defense, Inspector General. Retrieved from http://www.dodig.mil/

Centers for Medicare and Medicaid Services. (2013). *National health expenditures 2011 highlights*. Retrieved from http://cms.gov/

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). St Paul, MN: West.

Coppola, M. N., Harrison, J. P., Kerr, B., & Erckenbrack, D. (2007). The military managed healthcare system. In P. R. Kongstvedt (Ed.), *Essentials of managed health care* (5th ed., pp. 633–653). Sudbury, MA: Jones and Bartlett.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage Publications.

Cutler D.M., & McClellan, M. (2001). Is technological change in medicine worth it? Health Affairs, 20(5), September/October 2001, 11-29. doi:10.1377/hlthaff.20.5.11

Donabedian, A. (1966). Evaluating the quality of medical care. *Milbank Memorial Fund Quarterly, 44*, 166–203. https://www.jstor.org/stable/3348969

Donabedian, A. (1980). *The definition of quality and approaches to its assessment* (Vol. 3). Ann Arbor, MI: Health Administration Press.

Donabedian, A. (1988). The quality of health care: How can it be assessed? *JAMA, 260*, 1743–1748. https://doi.org/10.1001/jama.1988.0341020089033

Donabedian, A. (2003). *An introduction to quality assurance in health care*. New York, NY: Oxford University Press.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2013). *G*Power Version 3.1.7* [Computer software]. Retrieved from http://www.psycho.uni-duesseldorf.de/abteilungen/aap/gpower3/download-and-register

Field, R. I. (2007). *Health care regulation in America: Complexity, confrontation, and compromise.* New York, NY: Oxford University Press.

Granger, E., Boyer, J., Weiss, R., Linton, A., & Williams, T. V. (2010). Historical evolution of medical quality assurance in the Department of Defense. *Military Medicine, 175*, 581–586.

Health Insurance Portability and Accountability Act of 1996. Pub. L. No. 104–191, 110 Stat. 1936 (1996).

Hill-Burton Act of 1946. Pub. L. No. 93-641, 88 Stat. 2258 (1946).

Howell, D. C. (2010). *Statistical methods for psychology* (7th ed.). Belmont, CA: Wadsworth Cengage Learning.

Institute of Medicine. (1990). *Medicare: A strategy for quality assurance* (Vol. 1, K. N. Lohr, Ed.). Washington, DC: National Academy Press.

Karikari-Martin, P. (2011). Use of healthcare access models to inform the patient protection and Affordable Care Act. *Policy, Politics, and Nursing Practice, 11*, 286–293. https://doi.org/10.1177/1527154410393741

Koop, C. E. (1996, September 17). Manage with care. *Time*, p. 69.

Kovner, A. R., & Knickman, J. R. (Eds.). (2011). *Health care delivery in the United States* (10th ed.). New York, NY: Springer.

Kwon, S. (2011). Health care financing in Asia: Key issues and challenges. *Asia Pacific Journal of Public Health, 23*, 651–661. https://doi.org/10.1177/1010539511422940

Lehmann, E. L. (2006). *Nonparametrics: Statistical methods based on ranks.* Upper Saddle River, NJ: Prentice-Hall, Inc.

Lin, B., Lin, C., & Lin, Y. (2010). Patient satisfaction evaluations in different clinic care models: Care stratification under a national Demonstration Project. *Health & Place, 16*(1), 85–92. https://doi.org/10.1016/j.healthplace.2009.08.008

Longest, B. B., Jr. (2006). *Health policymaking in the United States* (4th ed.). Chicago, IL: Health Administration Press.

Mohaghegh, S. (2007). Cost containment strategies and quality of care. *Business Review, Cambridge, 7*, 308–314.

Morgan, G. A., Leech, N. L., Gloekner, G. W., & Barrett, K. C. (2007). *SPSS for introductory statistics: Use and interpretation* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.

Owusu-Frimpong, N., Nwankwo, S., & Dason, B. (2010). Measuring service quality and patient satisfaction with access to public and private healthcare delivery. *International Journal of Public Sector Management, 23*, 203–220. https://doi.org/10.1108/09513551011032455

Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS* (3rd ed.). New York, NY: McGraw-Hill.

Price, R. A., Elliott, M. N., Zaslavsky, A. M., Hays, R. D., Lehrman, W. G., Rybowski, L., Cleary, P. D. (2014). Examining the role of patient experience surveys in measuring health care quality. *Medical Care Research and Review, 71*, 522–554. https://doi.org/10.1177/1077558714541480

Prinzbach, R. F. (2008). *Controls over the TRICARE overseas healthcare program* (Report No. D-2008-045). Arlington, VA: Department of Defense, Inspector General. Retrieved from http://www.dodig.mil/

Ricketts, T. C., & Goldsmith, L. J. (2005). Access in health services research: The battle of the frameworks. *Nursing Outlook, 53*, 274–280. https://doi.org/10.1016/j.outlook.2005.06.007

Rodwin, M. A. (2010). The metamorphosis of managed care: Implications for health reform internationally. *Journal of Law, Medicine, and Ethics, 38*, 352–364. https://doi.org/10.1111/j.1748-720X.2010.00494.x

Russell, R. S., Johnson, D. M., & White, S. W. (2015). Patient perceptions of quality: Analyzing patient satisfaction surveys. *International Journal of Operations and Production Management, 35*, 1158–1181. https://doi.org/10.1108/IJOPM-02-2014-0074

Savedoff, W. D., & Hussmann, K. (2005). Why are health systems prone to corruption? In *Transparency international: Global corruption report 2006—Special focus: Corruption and health* (pp. 3–16). London, England: Pluto Press.

Schoen, C., Osborn, R., Squires, D., Doty, M. M., Pierson, R., & Applebaum, S. (2010). How health insurance design affects access to care and costs, by income, in eleven countries. *Health Affairs, 29*, 2323–2334. https://doi.org/10.1377/hlthaff.2010.0862

Scott, W. A. (2006). *Report on TRICARE overseas control over third party billing agencies and supplemental health insurance plans* (Report No. D-2006-051).

Arlington, VA: Department of Defense, Inspector General. Retrieved from http://www.dodig.mil/

Sutherland, E. (1940). White-collar criminality. *American Sociological Review, 5*, 1–12.

Tabachnick, B. G., & Fidell, L. S. (2012). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.

TRICARE Management Activity. (2008a). *TRICARE operations manual 6010.56-M*. Retrieved from http://manuals.tricare.osd.mil/

TRICARE Management Activity. (2008b). *TRICARE policy manual 6010.57-M*. Retrieved from http://manuals.tricare.osd.mil/

TRICARE Management Activity. (2008c). *TRICARE reimbursement manual 6010.58-M*. Retrieved from http://manuals.tricare.osd.mil/

TRICARE Management Activity. (2009). *32 CFR 199, TMA version*. Retrieved from http://manuals.tricare.osd.mil/

TRICARE Management Activity. (2012). *Evaluation of the TRICARE program: Access, cost, and quality*. Retrieved from http://www.tricare.mil/hpae/_docs/TRICARE2012_02_28v5.pdf

Vargas, I., Vázquez, M., Mogollón-Pérez, A., & Unger, J. (2010). Barriers of access to care in a managed competition model: Lessons from Colombia. *BMC Health Services Research, 10,* Article 297. https://doi.org/10.1186/1472-6963-10-297

Van de Ven, A. H. (2014). What matters most to patients? Participative provider care and staff courtesy. *Patient Experience Journal 1*(1), Article 17 131-139. Retrieved from http://pxjournal.org/journal/vol1/iss1/17

Wagner, A. K., Graves, A. J., Reiss, S. K., LeCates, R., Zhang, F., & Ross-Degnan, D. (2011). Access to care and medicines, burden of health care expenditures, and risk protection: Results from the World Health Survey. *Health Policy, 100*, 151–158. https://doi.org/10.1016/j.healthpol.2010.08.004

Weiner, J. P., Famadas, J. C., Waters, H. R., & Gikic, D. (2008). Managed care and private health insurance in a global context. *Journal of Health Politics, Policy, and Law, 33*, 1107–1131. https://doi.org/10.1215/03616878-2008-034

World Population Statistics. (2013). *North America population 2013*. Retrieved from http://www.worldpopulationstatistics.com/

Zwanziger, J., Hart, K. D., Kravitz, R. L., & Sloss, E. M. (2001). Evaluating large and complex demonstrations: The CHAMPUS reform initiative experience. *Health Services Research, 35*, 1229–1244.