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Providers' Knowledge of the U.S. Health Care System and their Medical Practice Choices: A Study of Physicians, Residents, and Non-Physician Practitioners

Cora Case
Walden University

Walden University

College of Social and Behavioral Sciences

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Cora Case

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Dr. Lydia Forsythe, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Raj Singh, Committee Member,
Public Policy and Administration Faculty

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Walden University
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Abstract

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by

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MBA, California Coast University, Santa Ana, 2003

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Dissertation Submitted in Partial Fulfillment

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Abstract

The expansion of health insurance through health care reform has reduced the number of uninsured. but access to providers has not been addressed. Understanding the relationship between practice choices and aptitude of health policy and delivery is essential to determine other factors or motivators that contribute to the development of health care access policies. This descriptive study explored the value-laden elements of health care reform, such as social constructions, to learn whether there are implicit ways to address the issue of access to health care in the United States. Schneider and Ingrams's conceptualization of policy making through social construction was used as the theoretical lens of this study. The research questions for the study examined the relationship between a provider's choices and their knowledge of health policy and delivery. This non-experimental, quantitative survey study used a convenience sample of 189 providers. The survey was a compilation of 4 existing instruments that were used to capture provider demographics and choices as well as scaled questions to assess knowledge. Data were analyzed through a series of chi-square tests. Significant relationships were found ($p < .05$) between the variables of specialty, medical licensure, and understanding of health policy and delivery concepts. This study contributes to social change by suggesting the need for health policy and delivery education programs geared towards providers. These changes could improve the level of provider engagement and be a catalyst for generating ideas of how the U.S. health care system could achieve the goal of providing efficient, high-quality care.

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Dedication

I would like to dedicate this to my husband. Although we had been married less than a year when I started this journey, your encouragement and support from the beginning is what has kept me going. Never allowing me to even consider giving up, not even for a second, and never making me feel like I was taking time away from us. From the moment I considered going down this path you knew and believed that once I set my mind on doing something I would finish. Your belief in me and us is what got me through. I do not know what I did to deserve such a good man. I love you.

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TABLE OF CONTENTS

List of Tables

Chapter 1: Introduction to the Study

Introduction

On March 23, 2010, President Obama signed the Patient Protection and Affordable Care Act (ACA) into law. This health care reform changed the way the funding and administration of health care in the United States was managed. The United States is the leader in the world when it comes to health care spending but ranks 37th in the world according to the World Health Organization of the world's best health care systems (Reid, 2009). According to the Centers for Medicare and Medicaid Services (CMS), the official estimate of total health care spending in the United States was 17.4% of the GDP in 2013. This represents $2.9 trillion or $9,255 per person (National Health Expenditure Data, 2014). In 2009, the Council of Economic Providers performed a comprehensive analysis of the impacts of health care reform noting that if health care costs continued to grow, the proportion of GDP devoted to health care in the United States was expected to reach 34% by 2040. The Council reported the system was plagued by substantial inefficiencies, such as the variation across states in Medicare spending per enrollee, with no corresponding change in medical need or outcome. The Council's report indicated that these large differences in spending suggest that up to 30% of health care costs (or about 5% of GDP) could be saved without compromising health outcomes. The sources of inefficiency in the system include payment systems that reward medical inputs rather than outcomes, high administrative costs, and inadequate focus on disease prevention (Council of Economic Providers, 2009).

One primary goal of the ACA legislation was to expand health care coverage to the nation's uninsured, totaling nearly 50 million people in 2010. The demand for primary care providers was expected to increase with the expansion of Medicaid, as well as subsidies for uninsured lower-income Americans without access to employer-based health coverage to purchase insurance in health insurance exchanges (Hofer, Abraham, & Moscovice, 2011). The ACA expanded health coverage by improving access to the individual health care market, reducing the cost of individual health coverage, and establishing health insurance marketplaces as well as expanding Medicaid (Key Features of the Affordable Care Act by Year, 2014). According to Sullivan and Gershon (2014), Medicaid provided health coverage for over 66 million individuals in 2010. If fully adopted, Medicaid expansion would increase the number of health insured Americans by more than 10 million people by expanding eligibility standards to cover almost all low-income individuals (Sullivan & Gershon, 2014).

Provisions of the ACA included the individual mandate requiring Americans to obtain health insurance or pay a penalty and the employer mandate that requires employers with 50 or more employees to offer health insurance to those employees or pay a penalty (Key Features of the Affordable Care Act by Year, 2014). Health insurance reform was also a significant provision in the new legislation that incorporated medical loss ratio (MLR) requirements and required companies to issue a health plan to any applicant regardless of pre-existing conditions (Key Features of the Affordable Care Act by Year, 2014). Finally, the expansion of Medicaid required participating states to

cover nearly all people under age 65 with incomes at or below 133% of the federal poverty level (Key Features of the Affordable Care Act by Year, 2014).

The ACA also allocated $10 billion every ten years for the Center for Medicare and Medicaid Innovation (CMMI), which was tasked with testing innovative payment and delivery models that aimed to reduce costs while maintaining or improving care quality (Gordon, 2014). Further, the ACA provided nearly $230 million to increase the number of medical residents, advanced practice registered nurses (APRN), and physician assistants (PA) in primary care; for 2014 this funding was expected to add an additional 2,800 primary care providers over five years (Gordon, 2014).

Hofer et al. (2011) predicted that between 4,307 and 6,940 additional primary care physicians would be needed within a decade to accommodate the increased use of primary care. This will all require a more robust pool of internal and family medicine providers than the United States currently has available (Hofer et al., 2011), and, therefore, will require a shift in the mindset of newly trained residents and providers about the medical practice choices they will make. Finally, one of the key strategies of health care reform was to reduce the cost of health care by addressing the health of the population in the United States (Burwell, 2014). In order to address population health issues, there will be a greater demand for not only primary care physicians but also non-physician clinicians (Garment, 2013).

The state of Nevada chose to participate in the voluntary expansion of Medicaid with the promise of federal funding match in order to expand the population who qualified for Medicaid coverage. Previously, males who fell under the mandated federal

poverty level were excluded from Medicaid coverage in Nevada (Medicaid-Marketplace Overview, 2014). Unfortunately, Nevada ranked 49th in the union for access and affordability according to the Commonwealth Fund (2014) and comes in last in the category of preventative care and quality treatment in health care settings. The state also ranked 47th in the nation for primary care physician to population ratio (America's Health Rankings, 2014).

While the ACA legislation came under scrutiny almost immediately, health care providers and administrators recognized some of the opportunities built into the health care reform bill. One such opportunity, included in section 3502 of the ACA to improve the quality and efficiency of health care, was the establishment of community health teams to support the Patient-Centered Medical Home (PCMH) (Read the Law, 2014). A PCMH program is a primary care oriented method of reducing administrative burdens and coordinating care. The primary focus of PCMH is to coordinate a patient's health care needs from preventative medicine to continuity of institutional health care and follow-up on specialist referrals and interventions (Cheng, 2012).

Innovative coordination and reimbursement models were also presented in the reform legislation, including: Accountable Care Organizations (ACO), bundled payments, and the Value-Based Purchasing (VBP) Program (Key Features of the Affordable Care Act by Year, 2014). Burwell (2014) described ACOs as doctors and hospitals working together to coordinate the care they provide to patients, subsequently reducing costs to the system, which in turn is shared with the providers. Patients receive better care because their doctors work together, keeping track of medical problems,

coordinating referrals, and improving health and reducing wasted time and hassle for patients (Burwell, 2014).

One of the programs established in an effort to link quality outcomes to reimbursement was the VBP program that offers financial incentives to hospitals to improve the quality of care (Key Features of the Affordable Care Act by Year, 2014). Hospitals are required to publicly report certain quality performance measures, as well as patient experience and these data are subsequently used in the calculation of the VBP incentive or penalty on a quarterly basis (Key Features of the Affordable Care Act by Year, 2014).

In an effort to reduce paperwork and administrative costs as well as encourage providers to work together to improve the coordination and quality of patient care, the concept of bundled payments was also introduced in the health reform legislation. Hospitals, doctors, and providers will be paid a flat rate for an episode of care rather than the current fragmented system in which services are billed separately to Medicare. Bundled payments are meant to align the incentives of those delivering care, resulting in savings that are shared between providers and the Medicare program (Key Features of the Affordable Care Act by Year, 2014). Also emerging are new ways to deliver care, for example through a virtual visits. In such cases, a patient, typically with a simple issue, can schedule an appointment to speak with their provider remotely (Eads, 2007).

Telemedicine, or telehealth, was also providing relief to rural communities by providing specialist care via advanced telecommunication programs. Kathleen Sebelius (2012) noted an example of one of these programs created at Emory University to train

health professionals and use telehealth technology to connect critical care units in rural Georgia to critical care doctors in Atlanta hospitals. The project aims to save money and improve the quality of care by reducing the need to transfer patients from rural hospitals to critical care units in Atlanta (Sebelius, 2012). These inventive modes of providing health care could lead to operational improvements, higher throughput, and better quality of care (Hofer et al., 2011).

Chapter 1 describes the problem and purpose for this study. This chapter includes a discussion of the research question and hypotheses, theoretical framework, and nature of the study. Chapter 1 also provides definitions, scope, and delimitations. The limitations and significance of the study are in this chapter. Chapter 1 concludes with a summary and transition that outlines information discussed in Chapters 2 and 3.

Background of the Study

Cheng (2012) found that preventive care delivered by primary care physicians has been demonstrated to prevent costly emergency room visits and hospital admissions. Emergency room visits are considerably more expensive than outpatient office visits, even when the same treatment is provided in both settings, and preventive care has an even greater impact on cost savings in relation to inpatient hospital admissions (Cheng, 2012). Cheng also noted that based on an average cost of $5,300 per hospital admission in 2000; reducing preventable hospitalizations by just 5% can reduce inpatient costs by more than $1.3 billion, if individuals had received primary and preventive care.

Additional research has surveyed medical students' perceptions of the effectiveness of their medical school curriculum, concluding the need for changes in the

traditional medical school curriculum (Crosson, Lea, Roemer, & Ross, 2011). According to Crosson et al. (2011), residency training does little to expose young physicians to the actual costs of care delivery, to methods of avoiding duplication and waste, and to the impact of health care costs on the relative affordability of health care coverage. Leaders in medical education have subsequently identified the need for the enhancement of education in the areas of care coordination, awareness of costs, and continuous quality improvement (Crosson et al., 2011). Practicing physicians often complain that medical schools failed to provide them with any substantive business training reducing their ability to benefit financially from their extensive education (Iezzoni & El-Badri, 2012).

Training in a traditional primary care discipline (Family Medicine, Internal Medicine, and Pediatrics) has faced a decline in interest for several years. Primary Care and Internal Medicine Residency programs declining from 82 in 2000 to 50 in 2009 are evidence of this decrease (Pallant, McGarry, & Tammaro, 2011). Family Medicine Residency programs offered 18% fewer positions through the National Resident Matching Program (NRMP) and have filled less than half of matched positions with U.S. graduates since beginning a decline from 57% in 2000 to 40.5% in 2005 (Pallant et al., 2011).

The income gap between primary care and specialist physicians can also play a significant role in how graduating medical students determine their career path. The lower reimbursement for primary care physicians was having an adverse effect on the delivery of health care as graduating medical students choose higher-paying specialties to pay for large student loans (Wright, 2011). Another study on the factors associated with

medical students' career choices regarding Internal Medicine by Hauer et al. (2008) looked at the specific reasons for career choices in comparison to internal medicine. Hauer's study found that student perceptions of internal medicine training and jobs included the requirement for more paperwork, more breadth of knowledge, and lower income when compared to other medical specialty career paths. While yet another study assessed the challenges in primary care education by Pallant et al. (2011) and analyzed the reasons for the primary care physician shortage despite the significant role they play in the management of an individual's overall health care. They found that one contributor to the physician shortage was the medical school debt burden of up to $160,000 coupled with a primary care salary coming in the lowest of almost all physician-based careers. Finally, lifestyle concerns including schedule, income, and lack of prestige associated with this field are among the most prevalent reasons cited for the diminishing interest in the primary care specialties among young physicians (Lakhen & Laird, 2009).

The American Academy of Family Physicians (AAFP) devised a student interest "influencer" portfolio to explore medical students' interests as documented in four regional student interest stakeholder meetings in 2010 and 2011. The AAFP held the meetings to counteract the stagnation in students' interest in practicing family medicine. The meetings showed that the positive perceptions of family medicine include diverse and complex patients, family and life-friendly specialty, highest recruited specialty since 2007 and specialty for all environments/settings practice options. Negative perceptions, on the other hand, were too easy/too hard paradox, scope of practice paradox, doesn't

make any money, life style, bashing from different specialties, and lack of exposure to family medicine in medical school (Le, Tahara, Murata, Komiyama, & Onishi, 2014, p. 2).

Lastly, residency and fellowship programs have evolved and changed to meet the requirements of the new physician workforce. The change to regulated "duty hours" has also played a part in the required changes to these programs. Rotating internships are now completed in medical school and residencies consist of structured, discipline-specific experiences in increasingly complex care environments that are ruled by goals, objectives, and duty hour's regulations (Fischer, 2011).

Not only was there a declining number of young physicians entering the primary care specialty field but the perceptions of Medicare and Medicaid patients by existing primary care providers could also limit or restrict access to primary and preventative health care. In a study by the Henry J. Kaiser Family Foundation (2011) evaluating a physicians' willingness to serve more Medicaid patients, several primary care physicians explained that the decision to accept Medicaid patients would depend on the illness burden of the new patients; unless the new Medicaid patients were eligible because of disability, they would be no different from their regular patients. Another physician indicated that she would reconsider seeing more patients like the relatively healthy Medicaid patients she sees now if she received higher reimbursement, but that she would not reconsider if the new patients were more like her current Medicare patients, who are sicker and need a lot of services (Henry J. Kaiser Family Foundation, 2011).

A vast body of research exists on the reasons why a provider chooses to limit or not to take Medicare and Medicaid patients; however, few studies had explored what else can be done to encourage or educate providers to expand their panels to accept more of these patients. This study examined provider knowledge of health delivery in the United States and their subsequent medical practice choices with the intent to identify alternative opportunities for expanding access to care for existing and newly insured patients.

Problem Statement

With the enactment of the ACA, the trajectory for the future of health care delivery has begun to shift toward greater accountability for the cost and quality of care and an increased focus on the need for innovation to achieve change (Crosson et al., 2011). Understanding providers' knowledge and perceptions of health policy will be essential in order to meet some of the policy goals outlined in the legislation (Key Features of the Affordable Care Act by Year, 2014). This understanding could determine how a provider makes choices about their medical practice, including if they choose to pursue work in a specialty or work in a private or hospital setting. These perceptions could also be important in understanding why providers choose to accept or deny patients due to factors like ability to pay, type of health insurance, and health care needs.

The United States needs to improve the perception of primary care beginning in medical school, where initial impressions begin to take shape, and specialty choices are made. Medical school programs in the United States tend to emphasize inpatient treatment and cure of acute diseases rather than ambulatory care, primary prevention, and

management of chronic conditions. This de-emphasis on outpatient and preventive care deprives medical graduates of primary care experience (Cheng, 2012).

Medical students are graduating from their respective universities with little to no knowledge of health care policy. When they begin to pursue opportunities during their residencies they do not have all the information necessary to make informed decisions about their career direction. While health care reform includes additional funding for general medicine with the intention of promoting preventative medicine (Creating Jobs by Addressing Primary Care Workforce Needs, 2014), residents may choose specialties that appear to be a better choice over primary care.

The present study not only sought to understand the goals of health care reform and the primary care provider shortage, it examined some of the other factors that may be associated with provider choices other than income and lifestyle. It was postulated that an individual with high levels of knowledge about health policy, administration, and the goals of the ACA would have a more favorable view of the primary care career path.

The concept of social construction helps to explain that there is not a single view or truth to the problem and that a range of views can be valid in different ways (Alderson, 1998). This research study tested social construction by investigating how levels of awareness concerning the goals of health care reform could mediate the shortage of primary care providers. Findings from this research study could provide communities with the resources to develop education for the provider community at large in order to promote the importance of primary care and population health in order to care for the newly insured population of patients.

Purpose of the Study

The purpose of this quantitative study was to explore the relationships between providers' medical practice choices and knowledge of the health care system by health care providers located in Reno, Nevada. Specifically, providers who are credentialed to provide hospital care at the academic medical center including physicians, PAs, APRNs, as well as resident physicians. The variables included a practicing provider's career choices including specialty, level of licensure, and employment setting, and their perceived knowledge of the health care system. The independent variable(s) for the practicing providers was their specialty, licensure, and whether they work in a private or hospital setting while the dependent variable was their perceived knowledge of the health care system. In the case of a resident physician the independent variable and the dependent variables were the opposite of the practicing providers. Secondary variables, such as demographic information, that may be significant to the primary variables were also collected as part of the survey process.

The theory of social construction and policy design served as the study's theoretical framework by shaping the perspective of the study that focused on providers' knowledge and viewpoint of the health care system and their medical practice choices. The policy design element of this theory was the rational component bringing in the policymaking and implementation components that allow the inclusion of the policies that are meant to impact providers and address provider shortages. While the social construction element incorporates the underlying principles that exist in the law including

reduction in the number of individuals who are uninsured or incentivizing providers to accept Medicaid patients through shifts in reimbursement.

Research Questions and Hypotheses

RQ1: What, if any, are the relationships between providers' medical practice choices and their knowledge of the health care delivery system?

H_{01}: There is not a significant relationship between providers' medical practice choices and their knowledge of the health care delivery system.

H_{a1}: There is a significant relationship between providers' medical practice choices and their knowledge of the health care delivery system.

RQ2: What, if any, are the relationships between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system?

H_{02}: There is not a significant relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

H_{a2}: There is a significant relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

RQ3: What, if any, are the relationships between a resident physicians' knowledge of the health care delivery system and their choice of specialty?

H_{03}: There is not a significant relationship between a resident physicians' knowledge of the health care delivery system and their choice of specialty.

H_{a3}: There is a significant relationship between a resident physicians' knowledge of the health care delivery system and their choice of specialty.

Definition of Theoretical Constructs

According to Alderson (1998), theories are integral to healthcare practice, promotion, and research and the choice of theory, although often unacknowledged, shapes the way practitioners and researchers collect and interpret evidence. All thinking when it comes to research involves theories and theories influence how evidence is collected, analyzed, understood, and used; therefore, it is practical and scientific to examine them (Alderson, 1998).

In specifying the generalizable constructs of their theory of social construction and policy design, Schneider and Ingram (1993, 1997) sought to illuminate how policy designs shape the social construction of a policy's targeted population, the role of power in this relationship, and how policy design "feeds forward" to shape politics and democracy. The theory of social construction and policy design was developed to better understand why public policies sometimes fail to meet their purposes of solving public problems, supporting democratic institutions, or producing greater equality of citizenship (Ingram et al., 2007). Berger and Luckmann (1966) were the primary theorists of social construction supposing that society in and of itself is a human product. They argued that social order itself arises from "ongoing human production" and exists "only as a product of human activity" (p. 51).

Utilizing social construction and policy design as the theoretical lens shaped the perspective of this study, which focused on providers' knowledge and viewpoint of the health care system and their medical practice choices. The policy design element of this theory brings in the policymaking and implementation components that allowed the

inclusion of the policies that are meant to impact providers and address provider shortages. The social construction element allowed me to analyze some of the underlying principles that exist in the law, such as reducing the number of individuals who are uninsured by expanding Medicaid.

The Schneider and Ingram (1997) approach to policy design was that studies of policies now not only typically include the rational and instrumental components of design but also the value-laden elements, such as social constructions, rationales, and underlying assumptions. This study not only sought to understand the goals of health care reform and the primary care provider shortage, it examined some of the other factors that may be associated with provider choices other than income and lifestyle. Chapter 2 provides an in-depth explanation of the concepts and practical application of social construction and policy design theory.

Nature of the Study

This study examined the relationship of health care policy to the medical practice choices of providers. This study deployed a quantitative survey method to investigate variables known to influence the medical practice decisions of health care providers. This survey design allowed the researcher to access a large number of providers in Northern Nevada. In addition, a qualitative design would have required time demands on a workforce that was already burdened with a number of administrative tasks and participation would be low. Obtaining direct access to providers while they are at the worksite was another barrier to conducting a qualitative design for this population. A

survey design allows researchers to investigate multiple variables using a quantitative method (Creswell, 2009).

A quantitative research design was applicable to this non-experimental study to examine relationships between practicing providers' medical practice choices and their knowledge of the health care system. Inversely, this study also examined the relationships between a resident physicians' knowledge of the health care system and their current choice of specialty, pursued licensure level, and employment model. Neither approach had any active intervention on the independent variable. A detailed discussion of the research design and the variables known to influence the medical practice decisions of health care providers are described later in this study.

Definitions

The following terms were used throughout this dissertation study.

Employment Model: The organization of physician practice, whether institutional or private practice based (Goldsmith, 2012).

Licensure Level: The level of education achieved to be licensed as a Doctor of Medicine (MD), Doctor of Osteopathic Medicine (DO), Advanced Practice Registered Nurse (APRN), or Physician Assistant (PA).

Medical Practice: For the purposes of this study, medical practice included such variables as specialty, practice setting, level of licensure, institutional or private practice based employment, and the percentage of commercial versus government-insured patients for which the provider was willing to provide care.

Providers: For the purposes of this study, providers included MD, DO, APRN, PA, and Resident Physicians.

Specialty: Primary care including family, internal, or pediatric care; Obstetrics and Gynecology; General Surgery; Surgical sub-specialty including orthopedics, neurological, or oncology; Internal medicine specialist including as infectious disease, hospitalist, or emergency care.

Assumptions

The healthcare industry is highly regulated to ensure the safety and well being of patients. Based on the culture of the health care industry, the researcher made the following assumptions:

1. The participants represent the providers' profession and provide honest responses to the survey questions.
2. The participants understand the survey instructions and questions.
3. The survey instrument was appropriate to gather information from the study populations.
4. The researcher was able to obtain a statistically significant sampling.
5. The assessment of knowledge required multiple variables. For the purposes of this study, the evaluation of knowledge used the provider's valuation of their knowledge of certain principles in order to establish potential relationships.

Scope and Delimitations

This study was confined to providers who practice in Northern Nevada. There are many different practice settings for a provider to administer health care including

hospitals, urgent cares, and private medical offices. Licensed medical providers were of interest because of systemic, low growth rates in recruitment in primary care and the need to retain and employ new workers to meet the demands of health care reform. This study was confined to a survey method.

The results of this study may not be generalized to other health systems, medical schools or other communities. Providers' perceptions and knowledge are not to be generalized to other providers in Nevada that were not included in this study. Similarly, relationships between the perspectives and knowledge of the health care system on the medical practice choices of providers cannot be generalized to other providers in Nevada.

Limitations

This study was limited to one health care system and medical school located in Reno, Nevada. In order to control for bias, the survey excluded questions related to the size of a provider's practice as this information in combination with specialty could be attributed to the actual practice and potentially the provider.

The researcher acknowledges there was a limitation when combining knowledge and perspective based concepts in conjunction with more concrete principles that may include a practicing physician's specialty or medical practice design. A high response rate to the survey was required in order to test the significance of the relationships between the variables.

Significance

This study investigated how providers' perception and knowledge of the health care system might be influencing their medical practice choices. The findings of this

study could persuade the community to incorporate health care policy training into their medical school programs or develop community-wide training. This training could help providers understand health care delivery and other components of health policy that may have an impact on their decisions. The results may offer a way to curtail the growing shortage of new physicians currently entering the internal and family medicine pool of physicians (Hauer et al., 2008; Le et al., 2014; Wright, 2011). Over time, funding will also become increasingly directed to the primary care practitioner (PCP) to help manage a patient's care and a specialist will see less volume as the PCP manages a patient's care (Creating Jobs by Addressing Primary Care Workforce Needs, 2014). With the adoption of health care reform, there was a greater emphasis on preventative medicine and as such, the practice of general medicine was increasing in importance and influence (Preventative Services Covered under the Affordable Care Act, 2014).

This study looked at some of the goals of health care reform and what will be needed to achieve those objectives as the reimbursement climate changes to global and episodic type payment structures for health care services. Examining whether health care policy is effective in reaching its objectives can help us better understand the future direction of health care delivery. The Schneider and Ingram approach to policy design theory was used to not only evaluate the rational and instrumental components of the ACA but also the value-laden components including the underlying assumptions that are present in the new legislation of how the goals may be achieved (Schneider & Sidney, 2009).

The study was important to health care providers and government agencies at the local, state, and national levels because reimbursement is designed to decline and costs will continue to increase if we are not able to educate providers on the importance of utilization and cost management (Improving Quality and Lowering Costs 2015, 2014). Health care providers can use the information from this study to look at relationships with private health care institutions and medical schools differently. Government agencies can use the information to help support the need for the funding of Graduate Medical Education (GME) and analyze how it should be utilized. The information can also be used to support additional programs that follow similar logic that are meant to incentivize providers to work together, provide appropriate quality care, and reduce the cost of care overall (Improving Quality and Lowering Costs 2013, 2014).

Summary

Chapter 1 introduced the research study. This chapter discussed the ACA and the systemic shortage of primary care providers that is affecting the achievement of the goals outlined for health care reform. Chapter 1 outlined the research problem of the growing shortage of primary care providers and the lack of new primary care providers entering the field. This chapter presented the quantitative survey to investigate the relationships between provider medical practice choices and introduced the research questions and hypotheses. In addition, this chapter provided a brief discussion of the research methods, variables of interest to the study, significance, and the implication for positive social change.

Chapter 2 provides a literature review. This chapter highlights the gap in the literature and the need to investigate provider medical practice choices. Chapter 2 discusses the theoretical frameworks of social construction and policy design theory, and the application of the theories. Challenges the legislators in the United States are facing with the recruitment of primary care providers are also discussed. The quantitative research design is discussed in Chapter 3, which details the procedures to test the variables of interest. Chapter 3 includes the research method, design, and approach. Chapter 4 describes the statistical results and interprets the findings of the study. Chapter 5 provides information about the limitations of the study, recommendations for future research, and implications of the research on social change.

Chapter 2: Literature Review

Introduction

The purpose of this non-experimental, quantitative study was to explore the relationships between providers' medical practice choices and their knowledge of the health care system. Understanding providers' knowledge and perceptions of the ACA will be significant in order to achieve some of the policy goals outlined in the legislation (Key Features of the Affordable Care Act by Year, 2014), including greater accountability for the cost and quality of care and the need for innovation to achieve change (Crosson et al., 2011). This understanding could determine how a provider makes choices about their medical practice. These perceptions are also important in understanding why providers choose to accept patients despite their ability to pay, type of health insurance, or health care need.

A vast body of research exists on how providers choose their specialty. This research assesses factors including: workload, compensation, training, job satisfaction, and independence to understand how providers make this choice (Crosson et al., 2011; Fischer, 2011; Hauer et al., 2008; Lakhen & Laird, 2009; Pallant et al., 2011; Stempniak, 2013; Wright, 2011). There have also been nationwide studies of why a provider chooses to limit or reject Medicare and Medicaid patients (Henry J. Kaiser Foundation, 2011; The Physicians Foundation, 2014).

There are many articles discussing social construction theory, which is the foundation of the theory of social construction and policy design by Anne Schneider and Helen Ingram, one of the leading theories for understanding the policy process (Pierce et

al., 2014; Schneider & Sidney, 2009). Despite this interest and the vast body of research, a gap remains in the empirical studies investigating the multidimensional process through which providers identify with the health care delivery environment as well as their perceived knowledge. There has only been one study that combined a survey developed by the Kaiser Family Foundation to assess the public's knowledge of the ACA (Rocke, Thomas, Puscas, & Lee, 2014).

The following literature review provides an overview and rationale for this study. It integrates literature from the disciplines of social construction, health policy, and providers' perspectives of health policy as well as provider training, providers' medical practice choices, and the shortage of physicians in the United States. Included in this chapter is the theoretical framework of Schneider and Ingram's theory of social construction and policy design (1993, 1997). This study investigated the social construction aspects of the theory that sought to understand the value-laden components of the ACA.

Literature Search Strategy

A literature search was conducted for the years 2009 through 2014. Research databases for the study include Academic Search Complete, ProQuest, SAGE Premier, and ProQuest Dissertation and Theses research databases. The results of a thorough scan of online public, private, nonprofit publications, and books were included in the literature search. Initially, an Internet search was conducted using the term *physician survey*, which led to national studies performed by The Physicians Foundation and the Center for Studying Health System Change. Moreover, Internet searches also resulted in other

reports prepared by reputable professional organizations and government entities including the Kaiser Family Foundation, the United States Department of Health and Human Services, and the Commonwealth Fund. Keywords used for the literature search were *Graduate Medical Education, Patient Protection and Affordable Care Act (PPACA), primary care and PPACA, medical resident choices, medical student choices, medical practice choices, physician specialty choices, physician career choices, health policy, knowledge of health policy, perspectives of the PPACA, physician shortage, Medicaid expansion,* and *primary care access*. The keywords used to search for literature related to the theory used in this study were *social construction, policy design and social construction theory, policy design theory, and Schneider and Ingram*.

The search yielded robust research on the shortage of primary care providers in the United States as well as a lack of new entrants into the primary care specialty field. These findings then lead to additional studies performed to identify the contributing factors that influence a medical student's choice of specialty. There are also several studies assessing physician's beliefs and attitudes towards the ACA and health care reform. The search for Medicaid expansion yielded a number of recent studies on how States that have chosen to expand are now struggling to meet the demand of new patients in an environment that already has a short supply of primary care providers.

The search yielded a limited amount of information on the theory of social construction and policy design. However, there were studies of the potential future application of the theory as well as the use of the theory in past applications that yielded additional articles and books.

Theoretical Foundation

The theory of social construction and policy design was developed to better understand why public policies sometimes fail to meet their goals of solving public problems, supporting democratic institutions, or producing greater equality of citizenship (Ingram et al., 2007). Schneider and Ingram's theory (1997) includes social construction as their approach to understanding the policy process. According to Schneider and Sidney (2009), social construction refers to an underlying understanding of the social world by an individuals' own interpretation that produces a social reality. They went on to explain the shared understanding or interpretation of this social reality among people is what generates common rules, norms, identities, concepts, and institutions. More importantly, when people stop accepting or believing in these previously shared interpretations of social reality or constructions, these constructions begin to change (Schneider & Sidney, 2009).

The Schneider and Ingram (1997) approach to policy design is that studies of policies not only include the rational and instrumental components of design but also the value-laden elements of social constructions, rationales, and underlying assumptions. In specifying the generalizable constructs of their theory, Schneider and Ingram (1993, 1997) sought to illuminate how policy designs shape the social construction of a policy's targeted population, the role of power in this relationship, and how policy design "feeds forward" to shape politics and democracy.

Schneider and Ingram (1993) suggested that normative judgments about a policies' targeted population, in the case of this study the uninsured and physician

shortage, have significant implications for the policy process leading to either support or rejection of the policies by the provider community. They argued that these target populations are socially constructed in such a way that is reflected in traditional images of these populations "portraying groups in positive or negative terms through symbolic language, metaphors, and stories" (Schneider & Ingram, 1993, p. 334). According to the authors, positive social constructions include such images as deserving, intelligent, honest, etc., while negative social constructions refer to individuals as dishonest, stupid, undeserving, and selfish (p. 335).

Following this line of reasoning, the public as well as officials use these socially constructed target populations to make sense of public policy issues. Subsequently, when officials are developing public policies they first anticipate how the target population will react to the proposed policy, and second, they consider how the public will respond to the policy. The public's response will depend on whether the target population is viewed as deserving or undeserving of the policy. This evaluation of policies by public officials helps to explain why some groups benefit from a policy more than others.

This process further led Schneider and Ingram (1993) to split the types of target populations into two groups based on their perceived power to influence political officials and their perceived deservedness of policy support. The authors then categorized the target populations of influence and deservedness into four more defined types of target populations: *advantaged, contenders, dependents,* and *deviants*. Advantaged populations are positively constructed populations who deserve policy support and are politically powerful such as the middle class, the elderly, or the military. Contenders are also

politically powerful but not viewed as deserving of policy support and include the wealthy, the unions, and powerful corporations. Dependents are not politically powerful but are positively constructed populations who deserve policy support and include children, mothers, and the poor. Lastly, deviants or criminals are a negatively constructed population, and viewed as undeserving of policy support (Schneider & Ingram, 2005).

The power and positive construction of the advantaged population explains, in part, a public official's tendency to provide beneficial policy support to this population. Positive construction also helps to explain the dependent population who deserve policy support but on a much smaller scale since dependents lack political power to advocate for more resources. In contrast, the negative construction of the contender population prevents public officials from providing them with beneficial policies and their political power is so strong that officials struggle with implementing policies that impact them. Consequently legislation is developed that benefits contenders in a way that is concealed from the public through various loopholes. While the negative construction of the deviant population presents little risk to the officials, they become overly burdened by punishing policies (Schneider & Ingram, 1993).

The choice of policy tools and policy designs is determined by the target population and defined in the policy in order to promote compliance or to motivate the group to take advantage of the policy opportunities. Positively constructed target populations use policy tools that incorporate learning, capacity building, or inducement tools in order for them to utilize the policy to their advantage. While negatively

constructed target populations use policy instruments that are coercive and involve sanctions or, in some instances, even death (Schneider & Ingram, 1993).

The differences between the ways public officials treat different populations send people powerful messages about their behavior and their identity. Which in turn affects their attitudes, perspectives, capacity for mobilization, and the level of participation in the policy process (Schneider & Ingram, 2005). Advantaged populations quickly learn that their success and welfare are necessary to the nation's success and accept the fact that they deserve beneficial policies due to their merit. Contenders often become convinced that they are mistrusted and that their significant power does not always serve them well. Dependents continuously receive messages that they are unimportant due to the lack of their input to the public's welfare. They learn that support from government is unpopular and instead they should seek help from various non-profit organizations. Deviants learn that "their problems are their fault and that they deserve nothing but disrespect, hatred, incarceration, and isolation from society" (Schneider & Ingram, 2005, p. 20).

The cyclical dynamic among policy design, target populations, and feed-forward effects is important to understand in order to explain the theory's core suggestions. "Either policy design is a function of social construction and power creating a proposition of target populations, or social construction and power is a function of policy design creating a proposition of feed-forward impacts" (Pierce, Siddiki, Jones, Schumacher, Pattison, & Peterson, 2014, p. 6).

Applying Schneider and Ingram's framework to the Affordable Care Act illustrates social construction at work. Since the legislation is fairly new, and the policies

are being introduced over time, identifying the possible target populations can help predict the direction in which the policies will further develop and highlight possible avenues for reframing the issues of the provider access and shortage. The intent of this study was to learn whether there are other implicit ways to address the issue of access to health care in the United States.

There are many associations that can be made between the defined target populations in the legislation and the defined target populations in the theory of policy design and social construction. First, there are the advantaged, or the licensed medical care providers of high socioeconomic status who, due to their pursuit for higher education and strong self-discipline, are seen as making wise choices. The advantaged are positively constructed and perceived as deserving of beneficial policies. This population also has significant influence on the public's choices and has the ability to stimulate support for health policy.

Second, the contender category is made up of the politically powerful and wealthy, are negatively constructed, and not seen as deserving of policy support. However, their political power has the ability to influence policy budget decisions. These decisions could include how a state plans to pay for the expansion of Medicaid or the assessment of penalties to corporations by the federal government for not providing health insurance coverage to employees.

Third, there is the dependent category of the uninsured population who has been unable to access the care they need other than through an emergency room or county supported clinic. This inability to access care has been directly attributed to the fact that

they do not have health insurance and lack the ability to pay for their care. This population would generally be seen as deserving of this policy to reduce the number of uninsured in the United States but possess little power to advocate in support of or against the policy. The voluntary expansion of Medicaid by states has increased the Medicaid caseloads by as much as 67% in a low income standard state and 43% in a moderate income standard state (Sullivan & Gershon, 2014).

Lastly, some members of the uninsured population could also be seen as deviants due to their low socioeconomic status. These individuals lack self-control and discipline, are seen as unable to make wise choices, and perceived as responsible for their struggles by the public. Subsequently, these individuals are likely to fall into this category due to their failing health. Unfortunately, even with the expansion of Medicaid these individuals will still not access the care even if they do qualify for assistance.

Then there is the perception of Medicaid patients from the public's view and more importantly the medical provider community. According to Schneider and Sidney (2009), the importance of identifying the social constructions of target groups goes beyond the policymaking process and content to the impacts of public policies. Policies can reinforce images in the social world, as the public, decision makers, and members of the target groups themselves feel the effects of the policy.

Evaluation was needed of how policies can work to improve the standing of the target group by distributing benefits in such a way that replaces a negative image with a positive image. Reframing the uninsured target population as advantaged has the potential to influence the policies related to the provider shortage and limited access to

care. For example, expanding access to health care for individuals not previously afforded the opportunity to receive preventative treatment for a disease like diabetes could impact their ability to secure employment, which could enhance their social status. Identifying possible ways to reframe the underinsured population from dependent to advantaged was one of the central ideas of this study.

Literature Review

Health Policy in the United States

According to Cheng (2012), the ACA "provides political momentum and an important opportunity to focus public attention on healthcare system flaws in need of reform (p. 174)". The Department of Health and Human Services (HHS) has not exactly made it easy for physicians and hospitals to collaborate or work together. Up until the passage of the ACA the payment mechanisms for paying a doctor have been in conflict with how the hospital was paid.

This payment structure had been in place since 1983 when Medicare modified its reimbursement mechanism for hospitals to be based on a set fee, paid under Medicare Part A, determined in advance based on the patient's principal diagnosis. The physician payment scheme was changed to a fee schedule, paid under Medicare Part B, in 1992 that was based on the training and practice expense for rendering the service, regardless of the current market rate (Field, 2013). For example, a doctor bills Medicare for a surgery based on the procedure performed while the hospital bills Medicare for the operating room time, supplies, and room charge per day. The hospital will get paid a lump sum regardless of the cost to the institution. The physician gets their payment for the case

while the hospital covers the cost for everything else related to the patient's care in the hospital. If the patient stays in the hospital longer due to complications in the care of the patient the physician time and payment are not impacted, but the hospital's payment will not cover the cost of the patient. This misalignment of payment between the physician and the hospital makes it challenging to motivate physicians to spend extra time collaborating with the hospital to reduce the length of stay and the direct costs associated with their patients.

The legal barriers to clinical integration are also numerous including the Antitrust or Sherman Act, Ethics in Patient Referral Act or Stark Law, Anti-kickback Law, Civil Monetary Penalty, IRS tax-exemption laws, individual state's corporate practice of medicine and health insurance regulations, and malpractice liability (AHA, 2011). In particular, the Stark and Anti-kickback Law are commonly referred to when a physician and hospital are attempting to work together on a lease agreement for space or development of a new service line.

The Stark Law has historically made it very difficult for hospitals to partner with physicians to improve patient care and reduce costs. This is because there can be no financial incentive for either party to induce referrals. Fair market value comes into question and can be difficult to prove or discredit when evaluated by outside agencies. The Anti-kickback Law can be a secondary consequence of violating Stark Law and has both civil and criminal penalties related to all payers, not just governmental entities. Although, a provider who does not participate in government programs is not at risk of

violating Stark Law they can still violate the Anti-kickback Law if the arrangement does not fall into one of the safe harbors allowed by the law (AHA, 2011).

The Civil Monetary Penalty was enacted to ensure that hospitals do not make financial arrangements with physicians to reduce the cost of care for patient's insured by a government-funded program. This sanction was done in an effort to provide safeguards for this pool of patient's from receiving a different or lower level of care than a privately insured patient. This regulatory sanction has led to indirect consequences in that a hospital cannot engage in any agreements that link reduction in cost of a patient's care to physician incentives (AHA, 2011). Even with the passage of the ACA, that included such programs as shared savings and bundled payments, the existing laws have not been modified to be more precise by applying to only the deficiency in medically necessary services rather than to an overall decrease in the cost of care.

Still another unique challenge for non-profit, tax-exempt hospitals was the risk they run of losing their tax exemption status if it was deemed that the entity used charitable assets for the private benefit of an individual or entity (AHA, 2011). The loss of tax exemption status could mean millions of dollars for an organization that historically has provided a significant portion of the health care to the community of uninsured individuals. The impact could mean a shift to for-profit, publically-owned status in order to survive and a loss of a community owned asset. Even at the expense of programs that are meant to reduce the overall cost of care in the United States, organizations remain apprehensive to implement the constantly changing rules of health

care reform for fear of facing substantial penalties and loss of ability to provide care to their communities.

Providers' Perspectives on Health Policy

There have been several studies performed to assess both physician and resident's attitudes toward the ACA revealing a lack of consensus with respect to healthcare reform (Antiel et al., 2009; Gorman et al., 2011; Jackson Healthcare, 2011; Keckley, 2013; The Physicians Foundation, 2014). In a study performed in 2009, prior to the enactment of the ACA, physicians were asked to respond to four questions that related to the then current health care reform debate so were not directly tied to any particular proposal in the legislation. "A large majority of respondents (78%) agreed that physicians have a professional obligation to address societal health policy issues." There was also strong agreement "that every physician was professionally obligated to care for the uninsured or underinsured (73%) and most were willing to accept limits on reimbursement for expensive drugs and procedures for the sake of expanding access to basic health care (67%)." However, the physicians were divided on whether they had a moral objection to "using cost-effectiveness data to determine which treatments will be offered to patients." The study was also able to associate reimbursement to favorable support of health reform objectives but more due to "lack of familiarity with such reimbursement or fear of change that influences physicians' acceptance of cost-effectiveness data" (Antiel, Curlin, James, & Tilburt, 2009, p. 2).

In another survey conducted by Jackson Healthcare (2011), physicians' political views on healthcare reform show "that many agree that the ACA does not sufficiently

reform the U.S. healthcare system" (p. 1). This survey was conducted only a year after the ACA was signed into law but provides some assessment of providers' views on the policy. Even in the infancy of the implementation there was still a clear division among physicians of whether the ACA should be repealed and physicians who were against repealing the law, while imperfect, "believed it was a necessary first step in healthcare reform".

In 2011, another study was performed in an attempt to fill a gap in knowledge that evaluated the attitudes of future physicians rather than existing physicians. The study "demonstrated that medical students believe expansion of healthcare with access to all regardless of one's ability to pay for services should be priority in any healthcare legislation" (Gorman et al., 2011, p. 2). The study showed that a majority of medical students agreed that the healthcare system needed to be reformed, a third believed that the ACA would improve quality while half were unsure, and two-thirds thought the ACA would increase access.

The Deloitte Center for Health Solutions administered a survey to physicians in 2013 to assess physician perspectives on health care reform and the future of the medical profession. Based on the results most physicians believed that the performance of the health care system was suboptimal, but the ACA was a step in the right direction to addressing access and cost issues. However, they also believe "Medicaid and Medicare reimbursements may be problematic, prompting many physicians to limit or close their practices to these enrollees" (Keckley, 2013, p. 1).

Finally, a more recent biennial survey of America's Physicians performed on behalf of The Physicians Foundation in 2014 assessed practice patterns and perspectives of physicians. Some of the key findings showed a positive increase from 32% in 2012 to 44% in 2014 in a physician's morale and their feelings about the current state of the medical profession while 24% either do not see Medicare patients or limit the number of Medicare patients they see (The Provider Foundation, 2014). The study found that even more concerning, with respect to the expansion of Medicaid in some states, was the percentage of physicians (38%) who do not see Medicaid patients or limit the number of Medicaid patients. However, more than 49% of the patients who physicians care for are enrolled in Medicare or Medicaid (The Provider Foundation, 2014). There also appears to be a favorable opinion of the ACA from the younger pool of physicians, in contrast, "39% of physicians indicate they will accelerate their retirement plans due to changes in the healthcare system" (The Provider Foundation, 2014, p. 9).

Physician attitudes toward health care reform are in a period of transition, and as the ACA policies are implemented, further research is needed to continue the assessment of providers' reactions. These changes are important to compare with providers' medical practice choices in order to understand which policies are achieving their objectives as intended.

Providers' Medical Practice Choices

The medical practice choices that providers make have the ability to influence the policy goals in the ACA to "achieve a more equitable balance between generalist and specialist physicians" (Goodson, 2010). This balance is important because the projected

influx of newly insured individuals will require an expansion of primary care capacity. These choices include specialty, practice setting, level of medical licensure, and private practice or institutional employment.

Specialty. The choice of specialty, for purposes of this study, was segregated between primary care and specialists, as this delineation was the most prevalent in the existing research. The main factors that influence providers' choice of specialty include income, lifestyle, and debt (Goodson, 2010; Hauer et al., 2008; Pallant et al., 2011; Zhu et al., 2012).

According to Zhu and Metzler (2012), for every hundred medical school students who graduate next year, only seven will go into general internal medicine or private practice. The historical view of primary care and internal medicine as a specialty has been less than desirable with existing and retiring physicians sharing stories of unreasonable amounts of paperwork, lower compensation, more time coordinating their patient's care needs, and continued focus on volume rather than value. The new generation of physicians is more interested in prioritizing lifestyle into their career planning and is willing to trade income for the benefits of more vacation and continuity in their schedule (Hauer et al., 2008).

However, income does play a part in their career decisions with a primary care physician earning a median salary in 2010 of $159,000 while radiologists made more than double this amount (Zhu & Metzler, 2012). Legislators who crafted the ACA recognized the current payment model favors specialty disease and procedurally based care contributing to the imbalance of primary care and specialists (Goodson, 2010).

Further, the amount of debt incurred by medical students has been shown to have some influence on their choice of specialty considering that more than 85% of medical students now graduate with outstanding loans with 80% owing at least $100,000 (Zhu et al., 2012). Although research by Dezee et al. (2012) suggests that educational debt has little effect on a resident's choice of specialty, further research by Peccoralo et al. (2012) implies that debt was not a predictor of whether an individual will choose a primary care residency.

Practice Setting. The primary practice setting where a provider will care for patients can also play a role in providers' medical practice choices. Practice settings include office or hospital based patient care and is attributed, in part, to the specialty and level of licensure a provider is practicing under. Working in an office setting such as in primary care specialties can afford some schedule continuity but there is a perceived lack of time for patient visits because of the demand for volume of patients needed in order to earn a reasonable income. Specialists on the other hand will spend a portion of their time in the office setting but also in the hospital setting where they perform surgical procedures or are called on by internal medicine providers for a specialty consult as in the case of a cardiologist or infectious disease provider.

Finally, some specialists spend all of their time in the hospital setting. These include hospitalists, emergency medicine physicians, and anesthesiologists. Hospital based physician services involve other components not necessarily included in the office based services including call coverage and administrative committee work to ensure that hospital programs are in compliance with the specialty regulations. The growth in the

use of hospitalists over the past decade has also decreased the need for primary care physicians to care for their patients in both the office and hospital settings (Meltzer & Chung, 2010).

The level of licensure pursued by a provider will also dictate whether they will spend most of their time in the office or hospital setting. An APRN may be in the office setting or round on their supervising physician's patients in the hospital while a PA will assist their supervising physician with surgical cases. It is really dependent on the type of specialist for which the non-physician practitioner chooses to be employed.

Level of Licensure. The shortage of physicians is growing and only expected to get worse as components of the ACA are implemented. The influx of newly insured individuals into the health care market will require multiple strategies to meet the demand. The increased use of PA's and APRN's has been proposed as one way to improve access to primary care. PA's and APRN's are critical to coordinated health care in programs like the patient-centered medical home and accountable care organizations. "Nurse practitioners are registered nurses who are prepared, through advanced education and clinical training, to provide a wide range of preventative and acute health care services to individuals of all ages" (Stempniak, 2013, p. 49). "A physician assistant is a medical professional who works as part of a team with a doctor and is a graduate of an accredited PA educational program who is nationally certified and state-licensed to practice medicine under the supervision of a physician" (Stempniak, 2013, p. 50).

APRN's and PA's can enter the healthcare system after just two to three years of advanced training, compared with around eight years for physicians in U.S. medical

programs (Garment, 2013). This rapid completion of training does not only aid in stabilizing the supply of providers needed to meet the primary care demand, but is also part of the attraction for enrollment in APRN and PA programs. The average salary of an APRN in 2011 was $90,583 while a PA earned $94,870 (Stempniak, 2013), which was more than twice the national average salary of a U.S. citizen according to the Social Security Administration.

Employment Model. The type of employment a provider chooses can also be linked to the type of specialty and practice setting they choose but are also independent in nature. For example, an anesthesiologist, while a hospital based physician specialty, can either be self employed as part of a private group practice or employed by the health system for which the hospital they work in was owned.

The two primary types of employment are private solo or group practice and hospital based practice. The private practice employment model offers more autonomy for the decisions of the practice and is responsible for all administrative as well as patient care aspects of the practice. While the hospital based model affords more predictable income, steady patient base, and existing referral network. However, hospital employment also requires more committee work and the exposure to hospital politics can be seen as a drawback to this type of employment (Darves, 2000). Either model can influence the objectives to enhance primary care access and increase the supply of providers, but further research will be required as to the potential significance.

Provider Training

In the past 15 years, GME has been restructured around the competencies of patient care, medical knowledge, interpersonal and communication skills, practice-based learning and improvement, professionalism, and systems-based practice (Dezee et al., 2012). However, there remains a gap in basic health care business competencies that a physician will need to possess in order to be successful under the new health care reform legislation. The complexities of billing Medicare in order to get paid for the services a physician provides are overwhelming for those of us who are educated in this field. It is difficult for a medical practitioner to function successfully in the 21st century delivery system without the assistance of a skilled health care administrator, group practice, or hospital system that already has the infrastructure and skill set in place. The changes to the reimbursement landscape laid out in the ACA are complicated, and it will be important for physicians to have a general understanding of the proposed programs and changes. They need to be able to make informed decisions about where they work, what will be required to get reimbursed for services that are different from the past and recognizing that reimbursement will decline. Finally, the changes in reimbursement proposed by the law will make it even more difficult for physicians to pay off the large amount of debt incurred for their medical school training.

There are some studies that raise the issue of the perceivable gaps in residency training with the intention of persuading medical schools to incorporate future health care delivery skills into their curriculum. The skills include care coordination, systems-based practice, interdisciplinary teamwork, awareness of costs, ability to use information

technology, and continuous quality improvements. In a survey of 154 department chiefs at Kaiser Permanente the question was asked: "If you had to name one characteristic missing in the average newly hired physician in your department in knowledge, skills, and professionalism, what would it be?" With a 47% response rate one-third of the chiefs who responded said that a new physician showed skill deficiencies in the area of care coordination. Specifically, they noted issues of coordination across specialties, among provider types, across settings (i.e. hospital to post acute care), and over time as in the management of patients with chronic diseases. The last point is especially important when it comes to population health and management. It will be even more important for physicians to master this skill if they are to be financially successful under the reimbursement programs being trialed as part of the ACA (Crosson et al., 2011).

In the same study by Crosson et al. (2011), respondents indicated concerns about new physicians' leadership and management skills. Further, the respondents expressed the importance of physician leadership in the move toward delivery system integration and payment reform with hospitals in order to enhance the quality and cost of care for the population. The question was raised as to whether such training should be part of graduate medical education or whether it must take place in integrated care settings later (Crosson et al., 2011).

Provider Supply

There continues to be a significant concern about the provider shortage facing the United States. This was due to multiple reasons including the implementation of ACA and the increased percentage of individuals approaching the age of 65 is growing as a

proportion of the total population (Gordon, 2014). In addition, the inability of medical schools to open up more residency slots because of the limitations set by Medicare is accelerated by the lack of funding for GME by private health insurance companies.

There has also been an evolution in the GME program limiting the number of patients a resident can take responsibility for and also the number of work hours a resident can work on a daily and weekly basis. According to Fred (2012), prior to the changes it was not unheard of for a resident to be on-call everyday and work over 100 hours a week. While this can be a concern from a patient care aspect when the Accreditation Council for Graduate Medical Education required that physicians work no more than 80 hours a week with duty periods for interns and residents limited to 16 hours and 28 hours, respectively (Fred, 2012), there was little thought to the downstream consequences of increased cost or demand for providers because the government capped the number of reimbursed resident positions at 1996 levels (Steinmann, 2011). There also exists a large body of evidence indicating that duty hour limits have neither improved nor worsened quality of care and patient safety (Fred, 2012).

The Association of American Medical Colleges anticipates that the shortage in all specialties will grow to between 124,000 and 159,000 by 2025 with 45,000 of the gap in primary care alone by 2020 (Jacobson & Jazowski, 2011). There is a greater shortage in primary care of 25,000, which shows that as medical residents finish their training they are choosing other hospital and surgical specialties (Stempniak, 2013). A strong primary care workforce is vital to achieving improved health outcomes, disease prevention, and cost savings. Unfortunately, inequitable reimbursement structures and lack of support

within the system have resulted in medical students disinterest in entering into the primary care field (Cheng, 2012).

According to Iglehart (2011), once President Obama signed the ACA into law, the government became obligated to ensure that millions of previously uninsured people would now have access to health care and, more importantly, primary care physicians. The question still remains about whether the limitation on residency slots will be reevaluated as the supply of patients exceeds the supply of physicians who can provide the preventive care the legislation was counting on to reduce the cost of health care.

The literature predominately suggests that GME should be expanded to primary rather than specialty care with the goal to increase the supply of primary care physicians from 32% to at least 40% of all physicians (Rockney, Donino-lenhoff, Welcher, & Robertson, 2010). Physicians who provide primary care should also be compensated at least 70% of the median income of all physicians (Rockney et al., 2010). Rockney et al. (2010) also reported there has been a reallocation of 900 unused existing residency slots that have been devoted to primary care in order to maximize the cap on positions even without increasing positions or lifting the cap that exists in the current GME policy.

Another concern expressed about the present GME structure was that as each year passes, experienced physicians retire leaving a smaller and smaller pool of physicians who can supervise medical students through their residency program presenting a different challenge for medical licensure rules (Gordon, 2014). Bringing us to a different discussion whereby a caregiver's licensure will be pressed to expand the scope of patient care that can be provided independently by an APRN, PA, or a registered nurse (RN).

The expansion of licensure will be required if we are to keep up with the new demand for low cost, quality care as promised in the ACA and may still run short of capacity (Iglehart, 2011). Kathleen Sebelius, former Health and Human Services Secretary, said in an interview, "It does strike me – particularly in areas that are underserved- that to train nurse practitioners up to a certain skill level and then to restrict the actual level of services they are allowed to provide is a bit of a Catch-22. And we've got a lot of states that are doing that right now" (Iglehart, 2011, p. 192). Ensuring that APRN's and PA's are functioning at the top of their licensure will require stratification of the population into levels by acuity from simple to complex. For example, a physician extender automatically treats a simple cold or broken arm and the patient suffering a heart attack or stroke is elevated to a physician.

Further, another reason to look at expanding the scope of services for a PA was their apparent flexibility to be able to change specialties unlike their physician and APRN counterparts who tend to be bound to one specialty. In a study by Hooker, Cawley, and Leinweber (2010), 49% of all clinically active PAs changed specialties sometime in their careers.

Finally, GME is wholly supported by government funding sources with no financial contribution from private insurers such as Anthem or United Healthcare. Whether this lack of support is due to the initial purpose of GME, borne from the creation of the Medicare and Medicare programs when there were no other funding sources, or the private industry nature of private health insurance companies that have stockholders interests at heart; the reality is that the entire health care system benefits from well-

trained physicians, regardless of the whether a privately insured member accesses a teaching hospital or not (Steinmann, 2011). A resident physician in a teaching facility also cares for all types of patients regardless of how they pay or their ability to pay.

Kaplan (2012) suggested that a significant portion of the shortage exists in underserved, minority populated areas since there are fewer minorities who eventually become physicians coupled with the greater population who fall into the minority category. He also noted that schools and communities have started to focus some of their efforts on growing this demographic of physicians by having communities concentrate on students who show promise and with exposure to the medical field could potentially choose to pursue a medical doctor degree. A significant reason for this lack of physicians in these underserved areas is simply due to communication gaps, patients become frustrated when they cannot communicate with their physician and vice versa so accessing care is limited to emergencies and not preventative care (Kaplan, 2012). The Affordable Care Act includes a $300 million funding expansion of the National Health Service Corps that offers scholarships and education loan repayment programs for health professionals who agree to serve in designated shortage areas for two to five years (Iglehart, 2011).

Addressing the issue of provider supply can be done in multiple ways, some not as apparent as previously discussed. One study by Nyweide, Anthony, Chang, and Goodman (2011) surveyed the perceptions of the elderly on the supply of physicians and their health care and found that the concept of access to care was not closely associated with the supply of physicians. Rather, improving the quality and organization of care

may prove more beneficial (Nyweide et al., 2011). In addition, the ACA affords opportunities for physicians to improve population health by not only treating the disease, but also preventing illness through education and policies (Jacobson et al., 2011).

Summary and Conclusions

In the early stages of their education, medical students learn the curriculum that underscores the need to become excellent clinicians. Seasoned, practicing providers are also expected to keep up with clinical trends but have limited access to assistance or education from the business side of the health care system. Providers face the challenge of combining medical degrees with a business acumen that will be required to be profitable in the practice of medicine. This acumen is necessary because of the increasing cost of health care and the need to measure the integrated delivery of quality care in the form of accountable entities. This combination is critical if the physician is to be effective in the era of integrated and value-driven health care (Iezzoni & El-Badri, 2012).

The literature review presented in this chapter includes numerous studies on the shortage of providers specifically as it relates to primary care and the reasons there is an imbalance of primary care growth when compared to other specialty growth. The literature extends to the training of primary care physicians and the impact of health care reform on medical residency funding. However, there still remains a gap in the literature that attempts to evaluate providers' knowledge of health care delivery and policy in the United States. This knowledge in conjunction with the evaluation of providers' medical practice choices is unclear and warrants further study.

A review of the literature provided the constructs for the present study. Chapter 3 discusses the research method, the dependent, and independent variables. Hypotheses and research questions are also discussed in Chapter 3. The researcher also provides an account of the sampling procedure, size, population, data collection, and analyses that were used in this study.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to understand the potential relationships that providers' knowledge of the health care system has on the delivery of health care in the United States. The increasing number of individuals without health insurance in conjunction with the rising cost of health care was the impetus for the passage of the ACA and will have an impact on the choices of existing and future providers of medicine. Specifically, the law relies on two mechanisms to extend health coverage: an expansion of Medicaid eligibility and the development of the private health insurance market through health care exchanges (Field, 2013). There are challenges with both of these approaches including an already existing lack of providers who are willing to accept Medicaid patients and the dependence on individuals to follow through with paying premiums for health insurance coverage. Chapter 3 describes the research design, population and sample, sampling procedures, data collection, and analysis. The research questions, hypotheses, instrumentation, threats to validity, and ethical procedures for the study are also described in Chapter 3.

Research Design and Rationale

This research tested the theory of social construction and policy design as it explores the interrelationship between providers' perspectives and knowledge of the health care system and their medical practice choices. Secondary variables that may be significant to the primary variables such as demographic information were also collected as part of the survey process. The independent and dependent variables are providers'

knowledge of the health care system and their medical practice choices. The independent and dependent variables were interchangeable depending on whether the survey respondent was a practicing provider or a resident physician. Research was limited to practicing providers of the academic medical center and residents at the medical school in Northern Nevada. The practicing providers provided a retrospective view of health care reform while the residents provided a prospective view of their preliminary medical practice choices. The groups were further subdivided into categories by age, years of practice or specialty.

This research used a non-experimental, quantitative design. A non-experimental research design takes a different approach where the researcher is more of a passive agent who observes and describes the phenomenon as it is occurring or exists. There was no manipulation or causality established, and the question was proposed, giving an overall picture of a phenomenon rather than examining the degree or type of relationship. Then the relationship between variables of interest was explored without any active intervention or manipulation of the independent variable by the researcher. This approach to research design was meant to describe only the existing relationship without fully understanding or attempting to explain the relationship between independent and dependent variables.

The research relied upon a descriptive cross-sectional survey method, utilizing a survey instrument for data collection, with data interpretation relying on descriptive statistics. The study relied upon perceptions of residents and providers at a particular time and was not intended to extend over multiple periods of time. For purposes of this

study, only the adult acute care hospitals in one health system were considered for the survey. The researcher included all credentialed providers of adult acute care in one health system and residents at the medical school; therefore, there was no utilization of sampling methods for hospital or medical school inclusion. The researcher used stratified sampling among providers and residents.

A survey was an efficient method of collecting information from people about their ideas, feelings, beliefs, social, educational, and financial background, and this study captured the ideas, feelings, and beliefs of the respondents (Fink & Kosecoff, 1985). Prior to application, the researcher conducted a pilot test of the survey questionnaire by testing it on a small group of providers and residents.

Because this study was non-experimental in design, the researcher had control only over the measurement of subjects in the research. This type of design was useful when the researcher was interested in reactions; as in this research that was studying perceptions of the subject population (Sproull, 1995). The design of this study allows for results of analyzed data concerning knowledge of the health care system among providers and residents. The study attempted to compare and contrast medical practice choices with the health care system knowledge of residents and providers. The study reflected attitudinal positions of groups of individuals at a particular point in time, being the date of execution of the survey instrument.

Methodology

Population

The population studied included all licensed providers at the academic medical center and residents at the medical school practicing in Northern Nevada. A list was secured of active and courtesy staff providers from the roster of the academic medical center.

The number of individuals who were invited to participate in this study was 1,011 practicing providers and resident physicians. Adequate sample size from a variety of settings was necessary to address the possible relationship of the extraneous variables between specialty and employment model.

Sampling and Sampling Procedures

Convenience sampling was used to extract a sample from the population. This sampling method allowed the researcher to act within a specified period and under conditions that facilitate data collection. By its nature, convenience sampling sacrifices generalizability; therefore, it may not provide sufficient representation of the target population. This sacrifice means those selected for the study may only partially represent the population being investigated. As such, replication may be necessary to validate the results fully. Despite its deficiencies, convenience sampling was the best method of obtaining results from a sample population since time and conditions prohibited random sampling (Creswell, 2009).

The sampling frame was derived from a list that was secured of active and courtesy staff providers from the roster of the participating hospital. Practicing providers

and residents included subjects from solo and group practices who were randomly selected from the roster of the academic medical center in Northern Nevada. Other practice settings excluded are academic medical centers, government medical facilities, and health maintenance organizations (HMOs) due to the absence or limited presence in Northern Nevada. There were no other exclusions or limitations on the population.

To determine a sample size, the software G*Power was used. A two-tailed *t* test of the correlation of two groups, an effect size of .3, and a power of .95, resulted in a required sample size of 134 providers. The sampling frame for the study consisted of 923 providers and 88 resident physicians within the region.

Recruitment

Prior to commencement of the study, participants were provided with informed consent forms advising them of the nature of the study and assuring them of confidentiality. Participants were informed of the demographic information that was requested as part of the survey including gender, race, and age. While completion of any part of the survey was voluntary, they were informed of the importance of this information to the overall study. Subsequently, participants were assured that any name or identification of the participant would be excluded from all records. Participants were free to withdraw from the study and were not required to answer all questions on the survey instrument. When participants were identified and agreed to participate in the study, they received appropriate information concerning consent, length of study, and an offer for the participant to receive a copy of the final research results.

Participants were also told that there would be no compensation associated with the study, and the purpose of the study was the basis for a dissertation in doctoral research. In addition, the participant agreement form advised respondents that the researcher reserves the right to publish and present research results.

Data Collection

The researcher met with the Chief Medical Officer of the hospital, who also supports the residency program, with an outline of this study and a copy of the survey to request permission for the survey to be administered. The researcher obtained signed letters of cooperation to permit access to the personal email addresses and administration of the survey to potential participants from the authorizing official at each institution.

The survey instrument was provided to each participant with multiple-choice questions in order to provide easier scoring. Closed-ended questions provide greater efficiency over open-ended questions when scoring and coding. Reliability was enhanced because of the uniform data they provide since everyone responds in terms of the same options. It was the desire of the researcher to minimize the time requirement of respondents and to require as little effort as possible in completing the questionnaire. Closed-ended, multiple-choice questions yield specific responses that are easy for the respondent to complete and provide ease of tabulation.

The survey was conducted using a web-based survey tool called SurveyMonkey (see Appendix A). Once approved by the researcher's Institutional Review Board (IRB) through the Office of Human Research Protection from Walden University approval

number 04-21-15-0234509, the survey was e-mailed emailed to all potential participants, asking for their participation in this study (see Appendix D).

Instrumentation

The method used for inquiry relied on instrument administration through the utilization of a survey questionnaire. The survey was a compilation of demographic questions and four questionnaires used in previous studies (Gorman et al., 2011; Health Reform Quiz, 2014; HSC, 2008; The Physicians Foundation, 2014). Permission from the developers to use these instruments was included in Appendix B. The first two surveys included questions related to participants' knowledge and perception of ACA and the health care system. The second two surveys included questions assessing providers' medical practice choices including specialty, employment, and types of patients accepted. The survey contained 40 questions and the expected time to complete the survey was 15 minutes.

The survey developed by Gorman et al. (2011) was used to assess medical student's level of understanding and support of the major provisions of ACA. This survey was appropriate to this study because it specifically examined medical students. A similar survey was also used developed by the Kaiser Family Foundation was initially used as an assessment of the general public's knowledge of whether certain provisions were included in ACA (Health Reform Quiz, 2014). The survey was subsequently utilized in a study to assess otolaryngology physician knowledge of and attitudes toward ACA (Rocke et al., 2014).

A community tracking survey of physicians conducted by the Center for Studying Health System Change (HSC) in 2008 was used in this study to collect information about a physician's practice and the challenges facing physicians (HSC, 2008). This study included questions that were used to obtain similar information about physicians needed for this study. Finally, a bi-annual study was performed by The Physicians Foundation (2014) to assess the practice patterns and perspectives of physicians in the United States. This survey included additional questions that were used to determine more recent trends in provider medical practice choices.

The measurement technique within the instrument used multiple-choice because this gave the researcher the opportunity to specify the range of responses, permit ease of participation by the respondent, and avoid open-ended responses. The questionnaire was pretested by utilizing a pilot test of the questionnaire prior to engaging the instrument in the field for actual data collection. The pilot test and survey item assessments were administered to a small subset of the larger population. Reliability was established by using the pilot survey results to establish reliability, specifically internal consistency, using the Cronbach's alpha calculation.

Data Analysis Plan

The researcher used nominal, ordinal, and interval rating scales to measure responses and used the Statistical Package for Social Sciences (SPSS 21.0) computer support for arraying, analyzing and interpreting data. The three research questions were evaluated using logistic regression to predict physicians' knowledge of the health care

system and a resident physicians' choice of specialty. The research questions and hypotheses were as follows:

RQ1: What, if any, are the relationships between providers' medical practice choices and their knowledge of the health care delivery system?

H_{01}: There is not a significant relationship between providers' medical practice choices and their knowledge of the health care delivery system.

H_{a1}: There is a significant relationship between providers' medical practice choices and their knowledge of the health care delivery system.

RQ2: What, if any, are the relationships between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system?

H_{02}: There is not a significant relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

H_{a2}: There is a significant relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

RQ3: What, if any, are the relationships between resident physicians' knowledge of the health care delivery system and their choice of specialty?

H_{03}: There is not a significant relationship between resident physicians' knowledge of the health care delivery system and their choice of specialty.

H_{a3}: There is a significant relationship between resident physicians' knowledge of the health care delivery system and their choice of specialty.

The researcher applied descriptive statistics, which included the mean, median, and mode as well as measures of variation, and numbers depicting tallies, frequencies,

and percentages. The chi-square test was used to calculate the difference between the subjects in the research to determine if extraneous variables influence the outcome.

Threats to Validity

External validity refers to the degree to which the results of an empirical investigation can be generalized to and across individuals, settings, and times (Cook & Campbell, 1979). This study was not generalized to other health systems, medical schools or other communities outside the study population. Providers' perceptions and knowledge were not generalized to other providers. Similarly, relationships between the perspectives and knowledge of the health care system on the medical practice choices of providers were not generalized to other providers outside the study population. There are many other factors that cannot be controlled for and therefore impact the ability to generalize this study to other states including the voluntary expansion of Medicaid or the financial standing and health of a state's economy.

As with any quality research study, the time and effort invested in creating the research design was aimed at producing outcomes that truly represent what was to be studied, also known as internal validity (Heffner, 2004). Common threats to internal validity include history, maturation, instrumentation, testing, and attrition. History and maturation were potential threats as components of the Affordable Care Act continue to be implemented. However, the expansion of Medicaid and introduction of subsidized health insurance plans had been in place since 2014, so there was enough history of how the program has potentially impacting providers.

A limitation of using a survey as the primary tool for collecting research data was that there was limited direct involvement in collecting the data so it did not allow for the researcher to answer questions for clarification purposes or observe the participants (Cooper & Schindler, 2008). Low response rate, as well as choosing participants located in a specific region in one hospital, were also seen as a limitation of this study. Finally, attrition was a risk but given the instrumentation method, limited turnaround time, and large sample size this threat was minimized.

An additional consideration in research studies was statistical conclusion validity, which refers to the degree to which the researcher can accept or reject the null hypothesis based on whether the variables are related to one another. If the correlation of the data was not widely discrepant, the researcher accepted the null hypothesis; likewise, the researcher can reject the null hypothesis if the correlation of the data was widely discrepant, given the results are determined to be statistically significant (Cook & Campbell, 1979).

Ethical Procedures

Consent was obtained to conduct this study from the Walden University Institutional Review Board through the Office of Human Research Protection from Walden University approval number 04-21-15-0234509. Careful consideration was given to the nature of this study and its possible effects on the participants. In addition, by using Survey Monkey, participants were assured of confidentiality and anonymity as Survey Monkey participants do not have to create an account or give personal contact information in order to complete a survey. Participants were given my email and website

address if they had any questions regarding the survey. The informed consent language was distributed via email to all potential participants discussing the procedures for participation in the study. In addition, confidentiality issues, the voluntary nature of the study, the risks and benefits of participating in the study, as well as a way to contact the researcher and advisor with individual questions regarding the study were also discussed.

It was clearly stated in the informed consent language (Appendix D) that all records in this study remained confidential. Additionally, their decision whether or not to participate in this study in no way affected their employment relationship with the hospital. There were no physical risks or benefits for participation in the study. Participants were notified that there was no obligation to complete any part of the study in which they felt uncomfortable. This research did not offer any reward for sharing information nor did it make any promises to give anything for participation. All participants were made aware of the purpose of the study as well as how their information would be used. The data was stored on a password-protected computer with all the information from the study in a password protected website. Only the researcher has access to the website and the participants surveyed for the study were masked. The data was grouped, and if individuals are referred for some reason in this paper, they were referred only by male/female and age.

This researcher protects the identity of those who elected to participate in this study and ensures the confidentiality of the information collected. Members were not identified by name in the study, and the researcher was also unaware of their identity.

Summary

This research was intended to understand the knowledge and perspectives of physicians and residents as it relates to health care delivery and their medical practice choices. The non-experimental, quantitative design method was chosen in this study because it explores the interrelationship between variables of interest without any active intervention or manipulation of the independent variable by the researcher. This method was meant to describe only the existing relationship without fully understanding or attempting to explain the relationship between the independent and dependent variables. In this case the researcher sought to analyze the interrelationships between the providers' perspective and knowledge of the health care system and the choices that physicians and residents will make about their medical practice.

Chapter 4: Results

Introduction

This chapter provides the results of the study. The purpose of this non-experimental, quantitative study was to explore the relationships between the medical practice choices and knowledge of the health care system of providers located in Northern Nevada. Specifically, providers who are credentialed to provide hospital care at the academic medical center including physicians, PAs, APRNs, as well as resident physicians from the university school of medicine. The goal of this quantitative survey was to investigate if there was a relationship between the independent variables of specialty, level of licensure, and employment model, and the dependent variables of perceived knowledge of the health care system. In the case of a resident physician, the independent and dependent variables are reversed since the resident has not necessarily committed to their medical practice choices. The study further investigated variables known to influence the medical practice decisions of health care providers and resident physicians.

The objective of this study was to examine the following three research questions and hypotheses:

RQ1: What, if any, are the relationships between providers' medical practice choices and their knowledge of the health care delivery system?

H_{01}: There is not a significant relationship between providers' medical practice choices and their knowledge of the health care delivery system.

H_{a1}: There is a significant relationship between providers' medical practice choices and their knowledge of the health care delivery system.

RQ2: What, if any, are the relationships between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system?

H_{02}: There is not a significant relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

H_{a2}: There is a significant relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

RQ3: What, if any, are the relationships between resident physicians' knowledge of the health care delivery system and their choice of specialty?

H_{03}: There is not a significant relationship between resident physicians' knowledge of the health care delivery system and their choice of specialty.

H_{a3}: There is a significant relationship between resident physicians' knowledge of the health care delivery system and their choice of specialty.

This chapter describes the results of the study that investigated the association between (a) providers' medical practice choices and their perceived knowledge of certain health care delivery principles as reported by providers, (b) providers' willingness to see Medicaid patients in their practice and the same knowledge principles, and (c) resident physicians' perceived knowledge and their choice of specialty. The study postulated that (a) providers' specialty and licensure were related to their perceived knowledge of health care policy and delivery in the U.S., (b) those who reported a higher knowledge of health care policy and delivery were more likely to accept Medicaid patients in their practice,

and (c) resident physicians' choice of specialty was related to their knowledge of health care policy and delivery. Descriptive analysis involved demographic characteristics of providers including sex, age, race, medical licensure, years as a provider, specialty, professional status, as well as their perceived knowledge of ACA, reimbursement, cost to provide care, GME, Bundled Payments for Care Improvement (BPCI), and Medicare Shared Savings Program (MSSP).

Crosstab analysis was performed utilizing the survey data collected to investigate whether a provider's specialty, licensure, or willingness to accept Medicaid was associated with their knowledge of health care policy and delivery in the United States. The study's dependent variable, knowledge of health care delivery principles, was nominal, and the three independent variables, specialty, licensure, and willingness to accept Medicaid patients, were categorical and nominal. Data analysis was performed using SPSS 21.0.

This chapter provides information on data collection procedures, preliminary analysis of the data, primary analysis of the data used to address the research questions, and a summary of the results.

Pilot Study

A field test of the survey to test validity was performed by emailing the link to the survey in SurveyMonkey (including the consent language) to five physician leaders in the participating organization. Three responses were received with no recommended corrections to the consent language or survey instrument. The survey instrument was also tested on multiple mobile devices to ensure the format and integrity of the survey

was not jeopardized when opened on different software platforms. One minor adjustment was made to a question where the Likert scale was overlapping the selections.

Subsequently, a pilot test of the consent language and survey were distributed electronically to 86 providers who were randomly selected from the lists received from the Medical Staff office of the participating organization. The data from 18 returned surveys were entered into SPSS 21.0, and a Cronbach's alpha test was conducted to examine the Likert scale questions in the survey for internal consistency. It was determined that none of the questions needed to be removed from the instrument. The Cronbach's alpha was 0.810, indicating a high level of internal consistency with the scale and this specific sample of responses.

Data Collection

This study was non-experimental research. The only discrepancy in data collection from the plan presented in Chapter 3 was the list of all providers identified in this study was obtained from the academic medical center since all of the residents with the school of medicine are also on the medical staff of the hospital. An email survey collector was created in Survey Monkey, and the consent language with the link to the survey was emailed to 1,011 providers on the medical staff of the participating organization (Appendix D). The survey was available for two weeks and the email survey collector option was used in Survey Monkey. This tracked the email addresses that had responded so a reminder could be generated from the software and only sent to those providers who had not responded to the survey. Eleven surveys had an invalid email address. One hundred and eighty-nine surveys were completed, including 31

surveys that were partially completed, yielding a return response rate of 18.7%. All of the data is located online within the Survey Monkey database and is accessible by a password known only to the researcher. The email addresses of the survey responses are not retained or visible to the researcher. Although age, gender, and race were not considered to be factors for predicting medical practice choices, they were included on the demographic questionnaire. The data from the 189 surveys were entered into SPSS 21.0.

The software G*Power was used to determine a sample size. A two-tailed *t*-test of the correlation of two groups, an effect size of .3, and a power of .95 resulted in a required sample size of 123 providers. Since the study sample of 189 providers exceeded the established threshold to conduct the study a post-hoc power analysis was performed yielding a power of .99, demonstrating a significant strength of the relationship between variables. The completed surveys were downloaded into SPSS 21.0 for storage and data analysis.

As indicated in Table 1, 189 providers participated in the study. Of those responding 56% of the respondents were male and 44% were female. Nearly 30% of the respondents were under the age of 40, 33% were between the ages of 40 and 50, and 37% were over the age of 50. A majority of the respondents, 70%, worked as a doctor, 19% as an APRN, 4% as a PA and 7% as a resident physician. The specialty mix of respondents was 51% primary care, internal medicine and pediatrics, while 18% were surgeons, and 4% practice obstetrics and gynecology. The remaining 27% are either in other specialties such as pathology or are undecided. Thirty percent of the respondents were employed by

a hospital while 39% of the respondents reported they owned their practice or were a partner in a practice. A medical group or the university employed the remaining 31%. Seventeen percent had practiced 5 years or less, 36% had practiced more than 5 years but less than 16, 33% had practiced more than 16 years but less than 30, and 14% had practiced more than 30 years.

The summary statistics measured on a nominal basis were the providers' current position on accepting Medicare, Medicaid, and Commercial patients. Provider responses show that 81% see all Medicare patients, 12% limit the number of Medicare patients they see, and 7% exclude Medicare patients from their practice panel. Only 64% see all Medicaid patients, 23% limit the number of Medicaid patients they see, and 13% exclude these patients from their practice. The primary factors that influenced the decision of those providers who limit or exclude Medicaid patients from their practice were due to the billing requirements and inadequate reimbursement. A majority of the providers, 94%, did not limit or exclude Commercial patients from their patient panel.

The summary statistics measured on a scale were the providers' perceived knowledge of the health care reform legislation and other health care system characteristics. Also, the providers' perspective on their medical school training of health policy as well as their opinion about involvement in health policy decisions and the ACA was captured.

Of the respondents, 62% reported that they understand the recently enacted ACA legislation while the other 38% were neutral or disagreed. The other knowledge-based questions and responses are reported in Table 1. Finally, 10% of the respondents

believed that their medical school provided them with sufficient health policy education, while 72% disagreed that they received adequate health policy training from their medical school.

Table 1

Frequencies and Percentages for demographics, medical practice choices, and knowledge of health care policy (*N* = 189)

	f	%
Gender		
Male	105	56
Female	82	44
Age		
Under 29	7	4
Between 30 and 40	48	26
Between 40 and 50	61	33
Between 50 and 60	46	25
Over 60	25	12
Licensure		
Doctor (MD)/(DO)	127	70
Advanced Practice Registered Nurse (APRN)	35	19
Physician Assistant (PA)	7	4
Resident Physician	13	7
Specialty		
Primary Care	31	17
Internal Medicine	50	27
Pediatrics	12	7
Surgery General/Sub-Specialty	32	18
Obstetrics/Gynecology	7	4
Other	50	27
Professional Status		
Employed by a Hospital	55	30
Practice Owner/Partner/Associate	71	39
Employed by a Medical Group	30	16
Employed by a University	27	15
Other	8	4
Experience		
Less than 6 years	31	17
Between 6 and 15 years	65	36
Between 16 and 30 years	60	33
More than 30 years	25	14
What is your current position regarding Medicaid patients?		
See all of these patients	108	64
Limit number of these patients	38	23
Do not see these patients	22	13

(table continues)

	f	%
I understand the major provisions of the recently enacted health care reform legislation.		
Strongly Agree	11	7
Agree	91	55
Neither Agree or Disagree	36	22
Disagree	17	10
Strongly Disagree	9	5
I understand how hospitals and providers get paid for their services.		
Strongly Agree	16	10
Agree	73	45
Neither Agree or Disagree	39	24
Disagree	32	20
Strongly Disagree	3	2
I understand how much it costs to provide care to patients in the hospital.		
Strongly Agree	5	3
Agree	50	30
Neither Agree or Disagree	41	25
Disagree	62	38
Strongly Disagree	6	4
I understand the purpose of Graduate Medical Education (GME) funding to hospitals.		
Strongly Agree	24	15
Agree	60	37
Neither Agree or Disagree	36	22
Disagree	31	19
Strongly Disagree	13	8
I understand the Bundled Payments for Care Improvement Initiative (BPCI).		
Strongly Agree	7	4
Agree	50	30
Neither Agree or Disagree	42	26
Disagree	49	30
Strongly Disagree	16	10
I understand the purpose of the Medicare Shared Savings Program (MSSP).		
Strongly Agree	8	5
Agree	33	20
Neither Agree or Disagree	43	27
Disagree	58	36
Strongly Disagree	20	12
I believe medical school education has provided me with sufficient health policy training.		
Strongly Agree	2	1
Agree	14	9
Neither Agree or Disagree	30	18
Disagree	67	41
Strongly Disagree	51	31

Note. Frequencies not summing to $N = 189$ reflect missing data.

Treatment

The survey was administered as planned and the researcher was not faced with any challenges that prevented the planned implementation as described in Chapter 3.

Results

Descriptive statistics contained in this section describe the characteristics of the sample. The sample of interest in this study was physicians, APRNs, PAs, and resident physicians on the medical staff of the academic medical center in Northern Nevada.

Given that few responses for some of the survey questions were in the pediatrics or obstetrics specialty categories, those responses were combined with the primary care specialty category. Also, the responses in the general surgery specialty category were combined with the surgery sub-specialty category. Since there were few responses from participants aged 29 or younger this demographic category was combined with the category of 30-39 and labeled as 39 or younger for reporting purposes. This collapsing of responses enabled the cell sizes in the contingency tables to be greater, which increased the confidence of the researcher in the calculations of the chi-square test. Reported are the distribution of the variables and tables providing the scores evaluated in the study.

Preliminary Analysis

Cross tabulation analyses were conducted using Pearson's chi-square in order to examine the relationships between gender and several other categorical variables. As shown in Table 2, the relationship between the medical license and gender was significant, $p = .000$. A greater proportion of the males who responded to the survey were licensed as an MD/DO (83.0%), followed by Resident Physicians (10.0%), and PA/APRN (7.0%). The females, while still more heavily weighted towards MD/DO (53.1%), had a much higher proportion of respondents who were licensed as PA/APRN's (43.2%) than males, followed by Resident Physicians (3.7%). The relationship between

the respondent's agreement towards hospital employment and gender was also significant, $p = .012$. A greater proportion of males mostly disagree (46.0%) and somewhat disagree (32.6%), followed by those who somewhat agree (16.9%) and a smaller number of males mostly agree (4.5%). Conversely, females appeared to have a slightly more positive opinion about the trend towards hospital employment with less responding they mostly disagree (23.2%) and somewhat disagree (36.2%), then somewhat agree (29%), and mostly agree (11.6%). The relationships between gender and the other variables were not statistically significant ($p > .05$).

Table 2

Frequencies and Percentages for specialty, medical licensure, opinion of the future of the medical profession and hospital employment, and grading of the ACA by gender

	Gender				
	Female		Male		
	n	*%*	*n*	*%*	*p*
Specialty:					.095
Primary Care	27	33.3	23	23.0	
Internal Medicine	19	23.5	31	31.0	
Surgery	18	22.2	14	14.0	
Other/Undecided	17	21.0	32	32.0	
Medical License:					**.000**
Resident Physician	3	3.7	10	10.0	
PA/APRN	35	43.2	7	7.0	
MD/DO	43	53.1	83	83.0	
How do you feel about the future of the medical profession?					.250
Very Pessimistic	5	7.1	16	18.0	
Somewhat Pessimistic	34	48.6	40	44.9	
Somewhat Optimistic	27	38.6	29	32.6	
Very Optimistic	4	5.7	4	4.5	
Hospital employment of physicians is a positive trend likely to enhance quality of care and decrease costs?					**.012**
Mostly Disagree	16	23.2	41	46.0	
Somewhat Disagree	25	36.2	29	32.6	
Somewhat Agree	20	29.0	15	16.9	
Mostly Agree	8	11.6	4	4.5	
What overall grade would you give the ACA?					.142
A	7	10.0	12	13.5	
B	10	14.3	24	27.0	
C	26	37.1	26	29.2	
D	23	32.9	26	29.2	
F	4	5.7	1	1.1	

Note. Significant relationships ($p < .05$) are bold.

Crosstab analyses using Pearson's chi-square were conducted to examine the relationships between age and several other categorical variables. As shown in Table 3, the relationship between medical license and age was significant, $p = .000$. A greater proportion of those participants who are 40 or older are licensed as an MD/DO (83.3%, 75.0%, 88.0%), followed by PA/APRN's (16.7%, 22.7%, 8.0%), then residents (0%, 2.3%, 4%). Conversely, a greater proportion of the respondents who are a resident physician (21.2%) are less than 40 years old and there also appears to be an equal number

of respondents between the license category of MD/DO (40.3%) and PA/APRN (38.5%) who are less than 40 years old.

The relationship between the letter grade, A-F, a participant gave the ACA and age was significant, $p = .016$. A greater proportion of participants who were younger than 60 gave the ACA a letter grade of a C or better beginning with those from age 50-59 (80.4%), followed by those who were younger than 40 (65.0%), 40-49 (61.8%), and then the participants who were 60 or older (52.2%). Conversely, participants who were older than 60 had a larger proportion who gave the ACA a letter grade of a D or worse (47.8%), followed by age 40-49 (38.2%), then <40 (35%), and 50-59 (19.5%). The relationships between age and other variables were not statistically significant ($p > .05$).

Table 3

Frequencies and Percentages for specialty, medical licensure, opinion of the future of the medical profession and hospital employment, and grading of the ACA by age

	Age								
	39 or younger		40-49		50-59		60 or older		
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*p*
Specialty:									.676
Primary Care	13	25.0	16	26.7	13	29.5	8	32.0	
Internal Medicine	18	34.6	16	26.7	9	20.5	7	28.0	
Surgery	8	15.4	10	16.7	12	27.3	2	8.0	
Other/Undecided	13	25.0	18	30.0	10	22.7	8	32.0	
Medical License:									**.000**
Resident Physician	11	21.2	-	-	1	2.3	1	4.0	
PA/APRN	20	38.5	10	16.7	10	22.7	2	8.0	
MD/DO	21	40.3	50	83.3	33	75.0	22	88.0	
How do you feel about the future of the medical profession?									.084
Very Pessimistic	3	7.5	4	7.3	10	24.4	4	17.4	
Somewhat Pessimistic	18	45.0	29	52.7	17	41.5	10	43.5	
Somewhat Opt	17	42.5	19	34.5	14	34.1	6	26.1	
Very Optimistic	2	5.0	3	5.5	-	-	3	13.0	
Hospital employment of physicians is a positive trend likely to enhance quality of care and decrease costs?									.539
Mostly Disagree	10	25.0	25	46.3	16	39.0	6	26.1	
Somewhat Disagree	16	40.0	14	25.9	13	31.7	11	47.8	
Somewhat Agree	9	22.5	10	18.5	11	26.8	5	21.7	
Mostly Agree	5	12.5	5	9.3	1	2.4	1	4.3	
What overall grade would you give the ACA?									**.016**
A	-	-	9	16.4	6	14.6	4	17.4	
B	7	17.5	13	23.6	8	19.5	6	26.1	
C	19	47.5	12	21.8	19	46.3	2	8.7	
D	11	27.5	20	36.4	8	19.5	10	43.5	
F	3	7.5	1	1.8	-	-	1	4.3	

Note. Significant relationships ($p < .05$) are bold.

Primary Analyses

Hypotheses for Research Question 1.

H_{01}: There is no relationship between providers' medical practice choices and their knowledge of the health care delivery system.

H_{a1}: There is a relationship between providers' medical practice choices and their knowledge of the health care delivery system.

Crosstab analyses using Pearson's chi-square were conducted to examine the relationships between medical practice choices of providers and providers' understanding of health care policy and delivery in the U.S. As shown in Table 4, the relationship of specialty and a provider's understanding of the purpose of GME funding was significant, $p = .012$. A greater proportion of those participants who strongly agreed or agreed they understood the purpose of GME funding were in the Internal Medicine specialty category (69.6%), followed by Primary Care (59.5%), Other/Undecided (36.9%), and then the Surgery specialty (33.3%). Conversely, those participants who strongly disagreed or disagreed they understood the purpose of GME were Surgery (50.0%), followed by Other/Undecided (28.3%), Primary Care (21.4%), and then Internal Medicine (15.2%). The relationships between specialty and the other variables were not significant ($p > .05$).

Table 4

Frequencies and Percentages for knowledge of ACA, Payment, Cost, GME, BPCI, and MSSP by specialty

	Specialty								
	Primary Care		Internal Medicine		Surgery		Other/ Undecided		
	n	%	*n*	%	*n*	%	*n*	%	*p*
I understand:									
The Major provisions of ACA.									.414
Strongly Disagree	5	11.9	1	2.1	1	3.3	2	4.4	
Disagree	4	9.5	2	4.3	3	10.0	8	17.8	
Neutral	7	16.7	10	21.3	9	30.0	10	22.2	
Agree	22	52.4	31	66.0	16	53.3	22	48.9	
Strongly Agree	4	9.5	3	6.4	1	3.3	3	6.7	
How hospitals and providers are paid for their services.									.137
Strongly Disagree	2	4.9	-	-	-	-	1	2.2	
Disagree	7	17.1	6	26.7	8	26.7	11	23.9	
Neutral	7	17.1	7	36.7	11	36.7	14	30.4	
Agree	21	51.2	26	33.3	10	33.3	16	34.8	
Strongly Agree	4	9.8	7	3.3	1	3.3	4	8.7	
How much it costs to provide care to patients in the hospital.									.174
Strongly Disagree	1	2.4	2	4.3	2	6.7	1	2.2	
Disagree	17	40.5	16	34.8	9	30.0	20	43.5	
Neutral	7	16.7	8	17.4	9	30.0	17	37.0	
Agree	17	40.5	18	39.1	9	30.0	6	13.0	
Strongly Agree	-	-	2	4.3	1	3.3	2	4.3	
The purpose of Graduate Medical Education (GME) funding to hospitals.									**.012**
Strongly Disagree	4	9.5	2	4.3	3	10.0	4	8.7	
Disagree	5	11.9	5	10.9	12	40.0	9	19.6	
Neutral	8	19.0	7	15.2	5	16.7	16	34.8	
Agree	17	40.5	24	52.2	9	30.0	10	21.7	
Strongly Agree	8	19.0	8	17.4	1	3.3	7	15.2	
The Bundled Payments for Care Improvement Initiative (BPCI).									.051
Strongly Disagree	7	16.7	4	8.7	2	6.7	3	6.5	
Disagree	16	38.1	13	28.3	7	23.3	13	28.3	
Neutral	8	19.0	7	15.2	13	43.3	14	30.4	
Agree	11	26.2	21	45.7	6	20.0	12	26.1	
Strongly Agree	-	-	1	2.2	2	6.7	4	8.7	
The purpose of the Medicare Shared Savings Program (MSSP).									.679
Strongly Disagree	7	16.7	5	10.9	3	10.3	5	11.1	
Disagree	16	38.1	15	32.6	13	44.8	14	31.1	
Neutral	9	21.4	11	23.9	9	31.0	14	31.1	
Agree	8	19.0	14	30.4	3	10.3	8	17.8	
Strongly Agree	2	4.8	1	2.2	1	3.4	4	8.9	

Note. Significant relationships ($p < .05$) are bold.

As shown in Table 5, the relationship of medical license and a provider's understanding of the major provisions of the ACA was significant, $p = .022$. A greater proportion of those participants who strongly agreed or agreed they understood ACA were in the MD/DO category (70.3%), followed by PA/APRN (44.4%), and then Resident Physician (30.0%). The relationship between the understanding of how providers are paid for their services and licensure was also significant, $p = .001$. A greater proportion of MD/DO's agreed or strongly agreed with their understanding of how providers are paid for their services (62.7%) compared to the proportion of PA/APRN's (28.6%). Finally, the relationship of licensure and a provider's understanding of the purpose of GME funding was significant, $p = .000$. The proportion of providers understanding of the purpose of GME for MD/DO's (60.0%) and Resident Physician's (60.5%) was greater than PA/APRN's (17.1%). The relationships between medical licensure and the other variables were not significant ($p > .05$).

Table 5

Frequencies and Percentages for knowledge of ACA, Payment, Cost, GME, BPCI, and MSSP by Medical Licensure

	Medical Licensure						
	Resident Physician		PA/ APRN		MD/DO		
	n	*%*	*n*	*%*	*n*	*%*	*p*
I understand:							
The Major provisions of ACA.							**.022**
Strongly Disagree	1	10.0	2	5.6	6	5.1	
Disagree	2	20.0	8	22.2	7	5.9	
Neutral	4	40.0	10	27.8	22	18.6	
Agree	3	30.0	16	44.4	72	61.0	
Strongly Agree	-	-	-	-	11	9.3	
How hospitals and providers are paid for their services.							**.001**
Strongly Disagree	1	10.0	2	5.7	-	-	
Disagree	-	-	14	40.0	18	15.3	
Neutral	4	40.0	9	25.7	26	22.0	
Agree	5	50.0	9	25.7	59	50.0	
Strongly Agree	-	-	1	2.9	15	12.7	
How much it costs to provide care to patients in the hospital.							.420
Strongly Disagree	1	10.0	1	2.9	4	3.4	
Disagree	2	20.0	17	48.6	43	36.1	
Neutral	4	40.0	9	25.7	28	23.5	
Agree	2	20.0	7	20.0	41	34.5	
Strongly Agree	1	10.0	1	2.9	3	2.5	
The purpose of Graduate Medical Education (GME) funding to hospitals.							**.000**
Strongly Disagree	2	20.0	6	17.1	5	4.2	
Disagree	-	-	16	45.7	15	12.6	
Neutral	2	20.0	7	20.0	27	22.7	
Agree	5	50.0	6	17.1	49	41.2	
Strongly Agree	1	10.0	-	-	23	19.3	
The Bundled Payments for Care Improvement Initiative (BPCI).							.182
Strongly Disagree	2	20.0	3	8.6	11	9.2	
Disagree	4	40.0	15	42.9	30	25.2	
Neutral	3	30.0	8	22.9	31	26.1	
Agree	1	10.0	6	17.1	43	36.1	
Strongly Agree	-	-	3	8.6	4	3.4	
The purpose of the Medicare Shared Savings Program (MSSP).							.082
Strongly Disagree	3	30.0	4	11.8	13	11.0	
Disagree	2	20.0	19	55.9	37	31.4	
Neutral	4	40.0	6	17.6	33	28.0	
Agree	1	10.0	3	8.8	29	24.6	
Strongly Agree	-	-	2	5.9	6	5.1	

Note. Significant relationships ($p < .05$) are bold.

Although the crosstab performed between specialty and the various knowledge factors only showed one significant relationship ($p < .05$), this was enough to reject the null hypotheses for research question 1. However, the crosstab performed between medical licensure and the same knowledge factors indicated a significant relationship with three out of the six questions. Therefore, the null hypothesis for research question 1 can be rejected.

Hypotheses for Research Question 2.

H_{02}: There is no relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

H_{a2}: There is a relationship between providers' willingness to accept Medicaid patients and their knowledge of the health care delivery system.

Cross tabulation analyses were conducted using Pearson's chi-square in order to examine the relationships between providers' willingness to accept Medicaid patients and providers' understanding of health care policy and delivery in the U.S. As shown in Table 6, none of the relationships between a provider's willingness to accept Medicaid patients and the other knowledge variables were statistically significant ($p > .05$).

Table 6

Frequencies and Percentages for knowledge of ACA, Payment, Cost, GME, BPCI, and MSSP by willingness to accept Medicaid patients

	Willingness to Accept Medicaid Patients						
	See all		Limit		Do not see		
	n	*%*	*n*	*%*	*n*	*%*	*p*
I understand:							
The Major provisions of the ACA.							.436
Strongly Disagree	9	8.7	-	-	-	-	
Disagree	9	8.7	4	10.5	4	18.2	
Neutral	23	22.1	8	21.1	5	22.7	
Agree	57	54.8	22	57.9	12	54.5	
Strongly Agree	6	5.8	4	10.5	1	4.5	
How hospitals and providers are paid for their services.							.601
Strongly Disagree	3	2.9	-	-	-	-	
Disagree	19	18.3	7	18.9	6	27.3	
Neutral	27	26.0	9	24.3	3	13.6	
Agree	45	43.3	19	51.4	9	40.9	
Strongly Agree	10	9.6	2	5.4	4	18.2	
How much it costs to provide care to patients in the hospital.							.444
Strongly Disagree	4	3.8	2	5.3	-	-	
Disagree	37	35.6	13	34.2	12	54.5	
Neutral	27	26.0	8	21.1	6	27.3	
Agree	32	30.8	15	39.5	3	13.6	
Strongly Agree	4	3.8	-	-	1	4.5	
The purpose of Graduate Medical Education (GME) funding to hospitals.							.591
Strongly Disagree	8	7.7	2	5.3	3	13.6	
Disagree	16	15.4	10	26.3	5	22.7	
Neutral	27	26.0	6	15.8	3	13.6	
Agree	40	38.5	13	34.2	7	31.8	
Strongly Agree	13	12.5	7	18.4	4	18.2	
The Bundled Payments for Care Improvement Initiative (BPCI).							.684
Strongly Disagree	9	8.7	4	10.5	3	13.6	
Disagree	34	32.7	10	26.3	5	22.7	
Neutral	24	23.1	13	34.2	5	22.7	
Agree	32	30.8	11	28.9	7	31.8	
Strongly Agree	5	4.8	-	-	2	9.1	
The purpose of the Medicare Shared Savings Program (MSSP).							.508
Strongly Disagree	12	11.7	5	13.5	3	13.6	
Disagree	39	37.9	11	29.7	8	36.4	
Neutral	27	26.2	12	32.4	4	18.2	
Agree	20	19.4	9	24.3	4	18.2	
Strongly Agree	5	4.9	-	-	3	13.6	

The knowledge variables used in the crosstab to determine a relationship with providers' willingness to accept Medicaid did not indicate a significant relationship, therefore, the null hypothesis for research question 2 could not be rejected.

Hypotheses for Research Question 3.

H_{03}: There is no relationship between resident physicians' knowledge of the health care delivery system and their choice of specialty.

H_{a3}: There is a relationship between resident physicians' knowledge of the health care delivery system and their choice of specialty.

Crosstab analyses using Pearson's chi-square were conducted to examine the relationships between residents' understanding of health care policy and delivery in the U.S and their choice of specialty. As shown in Table 7, none of the relationships between residents' perceived understanding of certain health policy and delivery principles and their choice of specialty was statistically significant ($p > .05$).

Table 7

Frequencies and Percentages for knowledge by specialty for Resident Physicians

	Specialty						
	Primary Care		Internal Medicine		Other/ Undecided		
	n	*%*	*n*	*%*	*n*	*%*	*p*
I understand:							
The Major provisions of ACA.							.673
Strongly Disagree	-	-	1	20.0	-	-	
Disagree	1	50.0	-	-	1	33.3	
Neutral	1	50.0	2	40.0	1	33.3	
Agree	-	-	2	40.0	1	33.3	
Strongly Agree	-	-	-	-	-	-	
How hospitals and providers are paid for their services.							.231
Strongly Disagree	1	50.0	-	-	-	-	
Disagree	-	-	-	-	-	-	
Neutral	-	-	2	40.0	2	66.7	
Agree	1	50.0	3	60.0	1	33.3	
Strongly Agree	-	-	-	-	-	-	
How much it costs to provide care to patients in the hospital.							.386
Strongly Disagree	1	50.0	-	-	-	-	
Disagree	-	-	1	20.0	1	33.3	
Neutral	-	-	2	40.0	2	66.7	
Agree	1	50.0	1	20.0	-	-	
Strongly Agree	-	-	1	20.0	-	-	
The purpose of Graduate Medical Education (GME) funding to hospitals.							.115
Strongly Disagree	-	-	-	-	2	66.7	
Disagree	-	-	-	-	-	-	
Neutral	1	50.0	-	-	1	33.3	
Agree	1	50.0	4	80.0	-	-	
Strongly Agree	-	-	1	20.0	-	-	
The Bundled Payments for Care Improvement Initiative (BPCI).							.673
Strongly Disagree	1	50.0	-	-	1	33.3	
Disagree	1	50.0	2	40.0	1	33.3	
Neutral	-	-	2	40.0	1	33.3	
Agree	-	-	1	20.0	-	-	
Strongly Agree	-	-	-	-	-	-	
The purpose of the Medicare Shared Savings Program (MSSP).							.107
Strongly Disagree	1	50.0	-	-	2	66.7	
Disagree	-	-	2	40.0	-	-	
Neutral	-	-	3	60.0	1	33.3	
Agree	1	50.0	-	-	-	-	
Strongly Agree	-	-	-	-	-	-	

Summary

This study investigated the association between the medical practice choices of providers and their perceived understanding of certain health care policy and delivery principles utilizing an online administered survey instrument. Chapter 4 presented the results of the statistical review utilizing chi-square crosstab analyses. The crosstab analysis used to test the first hypothesis showed a statistically significant association between specialty and licensure as a medical practice choice and the participants' understanding of health policy and delivery principles. In addition, internal medicine and primary care providers have a greater understanding of the purpose of GME funding and those participants who are an MD/DO have a greater understanding of the ACA, hospital reimbursement, and purpose of GME than the other participants.

The crosstab analysis used to test the second hypothesis failed to reject the null hypothesis demonstrating there was not a significant relationship between providers' willingness to accept Medicaid patients and their understanding of health policy and delivery principles. The results of the crosstab analysis performed for the third hypothesis also failed to reject the null hypothesis indicating there was not a relationship between a resident physicians' perceived understanding of the health policy and delivery concepts included in the survey instrument and their choice of specialty.

Chapter 5 provides the interpretations of findings and the limitations of the study results that were presented in Chapter 4. The study significance, implications for social change, recommendations for this population and future research are discussed in Chapter 5.

Chapter 5: Discussion, Recommendations, and Conclusion

Introduction

The purpose of this quantitative research study was to determine if there was a relationship between providers' medical practice choices and their knowledge of health policy and delivery. The first question examined the relationship between a provider's choice of specialty and licensure and their perceived knowledge of the health care system in the U.S. In order to assess knowledge, providers were asked to rank their understanding of five health policy and delivery principle questions, including their understanding of the ACA, how much hospitals and providers are paid, how much it costs to take care of patients in the hospital, the purpose of GME funding, BPCI, and MSSP.

The second question assessed whether there was a relationship between a provider's willingness to accept Medicaid patients and their understanding of the health care system. The third question specifically looked at the resident physicians' perceived knowledge of health policy and delivery to determine if there was a correlation between that knowledge and their choice of specialty.

The findings of the study show the likelihood of a relationship between a provider's specialty and their understanding of the health policy and delivery principles presented. There was also a significant relationship between a provider's medical licensure and their understanding of the ACA, how hospitals are reimbursed, and the purpose of the GME program. However, there did not appear to be a relationship between a participants' willingness to accept Medicaid patients and the knowledge variables. Finally, although the number of responses was limited, when only residents

were evaluated, there did not appear to be a relationship between choice of specialty and the same health policy and delivery principles presented.

After years of provider recruitment studies and programs developed to address the shortage of physicians in the United States, only seven percent of providers will go into general internal medicine or private practice (Zhu & Metzler, 2012). The Association of American Medical Colleges anticipates that the shortage in all specialties will grow between 124,000 and 159,000 by 2025 with approximately 35% of the gap in primary care by 2020 (Jacobsen & Jazowski, 2011). There have been a number of studies that have suggested that workload, compensation, training, job satisfaction, and independence may be factors in a provider's choice of specialty (Crosson et al., 2011; Fischer, 2011; Hauer et al., 2008; Lakhen & Laird, 2009; Pallant et al., 2011; Stempniak, 2013; Wright, 2011). However, a gap remains in the research that investigates the multidimensional process through which providers identify with the health care environment.

This chapter includes an interpretation of the research findings, limitations of the study, recommendations for further research, implications for social change, and a conclusion of the study.

Interpretation of the Findings

The current study was unique because it addressed a gap in the literature by examining the variables of provider medical practice choices in relation to providers' understanding of certain health policy and delivery principles. Knowledge about the association between medical practice choices and understanding of health policy is essential. It could help in the development of health care access policies as well as

inclusion of health policy and delivery principles in the education that resident provider's receive during their medical school training.

The results of examining the first hypothesis revealed a statistically significant association between providers' specialty and their understanding of the purpose of the funding for GME, $p = .012$. A larger portion of the internal medicine and primary care providers felt they had a better understanding of the purpose of GME when compared to the surgery providers, other specialties, or those participants who were undecided. All of the participants, regardless of specialty, agreed or strongly agreed they understood the major provisions of the ACA. Further, the relationship between providers' medical licensure and their understanding of the ACA, how a hospital is paid for services, and the purpose of GME was significant, $p = .022, .001, .000$ respectively. The physician licensure category appeared to have a greater perceived understanding of the health policy and delivery principles presented in the survey. Overall, as a result of the significant relationships with specialty, medical licensure, and the participants' perceived understanding of the health policy and delivery principles presented, the null hypothesis was rejected.

However, the results of testing the second hypothesis did not find a significant relationship between a provider's willingness to accept Medicaid patients and their understanding of the health policy and delivery principles presented in the survey. While not statistically significant ($p > .05$), the results show a higher percentage of participants who do not see Medicaid patients disagreed they understood the major provisions of the ACA (18.2%), how hospitals are paid for their services (27.3%), and how much it costs

to provide care to a patient in the hospital (54.5%). Lacking the significance in a relationship between the variables, the null hypothesis could not be rejected.

The third model also used a crosstab analysis in order to test Hypothesis 3 that was aimed at predicting a resident's choice of specialty from their knowledge of the health policy and delivery principles presented in the survey. From the limited number of responses provided, there does not appear to be a relationship between a residents' choice of specialty and their perceived knowledge of the U.S. health care system. Therefore the study failed to reject the null hypothesis. However, this presents an opportunity for someone else to expand the sample to include more academic medical centers across the region or the United States.

The results of this study are consistent with social construction research that established a link between the value-laden elements of policy design and the normative judgments about a policy's targeted population. Opportunities exist for further research to assess other underlying principles that exist in the law that could possibly be used to address the shortage of medical providers in the United States and increase access to health care.

Limitations of the Study

The first limitation of the study was using a small sample size that was limited to individuals who were on the medical staff of the academic health system located in Northern Nevada. The sample was 127 physicians, 35 APRNs, seven PAs, and 13 resident physicians. This sample was not a true representation of the demographics of the entire state and may affect the degree to which the results can be generalized to other

populations. There might have been a higher response rate from the individuals who were asked to participate had the number of questions in the survey been reduced to more directly address the research questions in the study. Future research should consider a group of providers from different regions and practice settings as well as a larger group of resident physicians to explore research question three further.

A second limitation was the use of self-reported surveys to collect the data. There are some drawbacks to self-report measurements in that they rely on honest answers to sensitive questions, such as those asked about a provider's position on treating certain groups of patients or their opinion of certain health policies. Expanding the survey to a much larger population could result in less neutral responses to certain survey questions.

The third limitation of the study was the use of scaled questions to assess the provider's knowledge. The research participants might have over- or underestimated their own knowledge about certain health policy and delivery principles that were included in the survey. The questions that were used to assess knowledge were also limited to six broad topics including their understanding of ACA, GME, BPCI, MSSP, cost to provide hospital care, and reimbursement to hospital providers. Further research could develop questions to more accurately assess providers' knowledge of health policy and delivery principles. Another approach could introduce a qualitative aspect to the research by administering the current survey to focus groups made up of randomly selected participants, which may provide a different perspective or direction to the study.

Lastly, the study time frame was relatively short, only based on the current knowledge of providers and resident physicians, rather than assessed over time as the

health reform policies are introduced. Longer study duration with multiple variations in time such as quarterly or bi-annually would potentially benefit the overall significance of the study associations. The thought being that as providers either adapt or struggle under the evolving legislation the study could be modified to further assess providers' aptitude with health policy and administration principles.

Recommendations

The results of this study show that further research is warranted in this area. Understanding providers' knowledge and perceptions of the ACA will be significant in order to achieve some of the policy goals outlined in the legislation (Key Features of the Affordable Care Act by Year, 2014), including greater accountability for the cost and quality of care and the need for innovation to achieve change (Crosson et al., 2011).

This survey study should be replicated with individuals in other regions of the United States and practice settings to assess specifically the impact providers' knowledge of health policy and delivery principles has on their medical practice choices. Capturing a larger sample of resident physicians to more adequately determine the relationships that may exist between their knowledge of health policy and delivery principles and their choice of specialty or professional status is also recommended.

This study has also established a theoretical foundation to explore the value-laden elements of the policy design of the ACA, such as social constructions, rationales, and underlying assumptions (Schneider & Ingram, 1997) and to learn whether there are implicit ways to address the issue of access to health care in the United States. Identifying possible target populations in the new legislation can help predict the

direction in which the policies will further develop and highlight possible avenues for reframing the issues of the provider access and shortage.

The survey should be replicated and administered to a larger sample of participants. Also, the number of demographic and medical practice survey questions could be reduced to more specifically capture the practice choice and knowledge variables, which may result in a higher and more complete response rate. In addition, development and expansion of the knowledge-based assessment questions to be more specific and less subjective to the participants' perceived understanding of the health policy and delivery principles being assessed could produce different results. This study could also be replicated using an experimental research approach where one group takes part in a health policy and administration training and the other group does not, after which the survey would be administered to both groups of providers.

The results of this study underscore the recommendations made by previous research that it is important for physicians to master future health care delivery skills if they are to be financially successful under the reimbursement programs being trialed as part of the ACA (Crosson et al., 2011).

Implications for Social Change

The results of this study are important to medical school and health system administrators as they continue to pursue and identify different methods for recruiting providers to enhance access to health care in the United States. The need to understand how a provider's knowledge of health policy and delivery could impact their medical practice decisions was demonstrated. If resident physicians are taught about health

policy and delivery, it may foster creative thinking about how one can successfully operate under the new health reform legislation as well as ensure that citizens have access to quality health care.

A direct connection was shown that should encourage medical schools to address the issue by creating programs that teach health policy and administrative principles to medical students. There is also opportunity for health systems to develop a community-wide educational program that teaches practicing providers the business of health care.

The implications of this study show the understanding of health policy and delivery are related to the medical practice choices of providers. With the expansion of Medicaid in many states across the United States, providers and health systems are being challenged to provide health care to all in an efficient and timely basis. The more knowledge that providers have about the intent of the health care reform legislation and the health care delivery system the more successful the United States will be with achieving better health for our citizens.

Conclusion

The analysis of providers' knowledge of certain health policy and delivery principles provides new evidence that there are factors, other than income and lifestyle, which may influence a provider's medical practice choices. A contributing factor for this study was that, to my knowledge, this was the first study to examine certain variables of health policy and delivery knowledge in conjunction with a provider's medical practice choices. Further, resident physician's medical practice choices in conjunction with their understanding of the same health policy and delivery principles were examined.

Significant relationships were found between the variables of a provider's specialty, medical licensure, and their understanding of the ACA as well as other knowledge-based questions.

This study began with an extensive review of the literature on how providers choose their specialty such as workload, compensation, training, job satisfaction, and independence. There have also been nationwide studies of why a provider chooses to limit or not to take Medicare and Medicaid patients. Applying Schneider and Ingram's framework to the ACA illustrates social construction at work especially when defining the target populations of physicians and the uninsured. Policy design and social construction theory was used not only to analyze the apparent goals of a policy but to further understand the underlying value-based components that are not as apparent, but are just as important to its success. In the case of this study, the knowledge aspects appeared to be an important component to the success or failure of the new health care reform legislation.

The results of my research built on the previous research conducted to assess physician and resident's attitudes toward the ACA. While many agreed that the ACA does not sufficiently reform the health care system, they believed it was a necessary first step. The information from this study could be useful in determining other factors or motivators for health policy and delivery change. The findings of this study show the need for health policy and delivery programs geared towards practicing providers and resident physicians. These changes could improve the level of engagement with the

provider community and be a catalyst for generating more ideas of how the U.S. health care system could achieve the goal of providing efficient, high-quality care.

References

AHA. (2011). AHA: simplify, modernize and eliminate unnecessary rules. *American Hospital Association News, 47*(14), 5.

Alderson, P. (1998). Theories in health care and research: The importance of theories in health care. *British Medical Journal, 317*(7164), 1007-1010.

America's Health Rankings. (2014). Primary care physicians United States. Retrieved from http://www.americashealthrankings.org/ALL/PCP

Antiel, R., Curlin, F., James, K., & Tilburt, J. (2009). Physicians' beliefs and U.S. health care reform – A national survey. *The New England Journal of Medicine, 361*(23). Retrieved from http://www.nejm.org/doi/full/10.1056/NEJMp0907876#t=article

Berger, P. L. & Luckmann, T. (1966). The social construction of reality: A treatise in the sociology of knowledge. Garden City, NY: Anchor Books.

Burwell, S. M. (2014). Getting more out of every dollar: Improving health delivery in America. Retrieved from http://www.hhs.gov/blog/2014/09/getting-more-out-every-dollar-improving-health-delivery.html

Cheng, G. (2012). The national residency exchange: A proposal to restore primary care in an age of microspecialization. *American Journal of Law & Medicine, 38,* 158-195.

Cooper, D. R., & Schindler, P. S. (2008). Business research methods. Boston, MA: McGraw-Hill Irwin.

Council of Economic Providers. (2009). Economic case for health care reform. Retrieved from

http://www.whitehouse.gov/administration/eop/cea/TheEconomicCaseforHealthCareReform

Commonwealth Fund. (2014). Aiming higher: Results from a scorecard on state health system performance. Retrieved from http://www.commonwealthfund.org/~/media/files/publications/fund-report/2014/apr/state_profiles_2014_all_states.pdf

Cook, T. D. & Campbell, D. T. (1979). Quasi-Experimentation: Design and analysis issues for field settings. Boston, MA: Houghton Mifflin.

Creating Jobs by Addressing Primary Care Workforce Needs. (2014). Training new primary care providers. Retrieved from http://www.hhs.gov/healthcare/facts/factsheets/2013/06/jobs06212012.html

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

Crosson, F. J., Lea, J., Roemer, B., & Ross, M. (2011). Gaps in residency training should be addressed to better prepare doctors for a twenty-first century delivery system. *Health Affairs*, *30*, 11.

Dezee, K. J., Artino, A. R., Elnicki, D. M., Hemmer, P. A., & Durning, S. J. (2012). Medical education in the United States of America. *Medical Teacher*, *34*, 521-525.

Eads, M. (2007). Virtual office visits: A reachable and reimbursable innovation. Retrieved from http://www.aafp.org/fpm/2007/1000/p20.html

Field, R. (2013). Government as the crucible for free market health care: Regulation, reimbursement, and reform. *University of Pennsylvania Law Review*, *159*, 1669-1726.

Fink, A. & Kosecoff, J. (1985). How to conduct surveys: A step-by-step guide. Newbury Park, CA: Sage.

Fischer, S. (2011). The changing paradigm in residency and fellowship training: Embracing the future. *Medicine & Health Rhode Island*, *94*(6), 152-154.

Fred, H. L. (2012). Medical education on the brink: 62 years of front-line observations and opinions. *Texas Heart Institute Journal*, *39*(3), 322-329.

Garment, V. (2013). Nurse practitioners and physician assistants: Why you should hire one (or the other). Retrieved from http://profitable-practice.softwareadvice.com/nurse-practitioners-and-physician-assistants-why-you-should-hire-one-or-the-other-0513/

Goldsmith, J. (2012). The future of medical practice: Creating options for practicing physicians to control their professional destiny. Retrieved from http://www.physiciansfoundation.org/uploads/default/Physicians_Foundation_Future_of_Medical_Practices.pdf

Goodson, J. (2010). Patient protection and affordable care act: Promise and peril for primary care. *Annals of Internal Medicine*, *152*, 742-744.

Gordon, D. (2014). 15 things to know about the physician shortage. Retrieved from http://www.beckershospitalreview.com/hospital-physician-relationships/15-things-to-know-about-the-physician-shortage.html

Gordon, D. (2014). 60 things to know about healthcare reform. Retrieved from http://www.beckershospitalreview.com/lists/60-things-to-know-about-healthcare-reform.html

Gorman, P., Huntoon, K. M., McCluney, C. J., Scannell, C. A., Wiley, E. A., Bruno, R., & Andrews, A. (2011). Healthcare reform and the next generation: United States medical student attitudes toward the Patient Protection and Affordable Care Act. *PLoS ONE, 6*, 9.

Hauer, K., Durning, S., Kernan, W., Fagan, M., Mintz, M., O'Sullivan, P., Battistone, M., DeFer, T., Elnicki, M., Harrell, H., Reddy, S., Boscardin, C., & Schwartz, M. (2008). Factors associated with medical students' career choices regarding Internal Medicine. *Journal of the American Medical Association, 300*(10), 1154-1164.

Health Reform Quiz. (2014). Kaiser Family Foundation Health Reform Quiz. Retrieved from http://kff.org/quiz/health-reform-quiz/

Heffner, C. (2004). Research methods. Retrieved from the AllPsych Online website: http://allpsych.com/researchmethods/experimentalvalidity.html

Henry J. Kaiser Foundation. (2011). Kaiser Commission on Medicaid and the uninsured. Physician willingness and resources to serve more Medicaid patients: Perspectives from primary care physicians. Retrieved from http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8178.pdf

Hofer, A. N., Abraham, J. M., & Moscovice, I. (2011). Expansion of coverage under the Patient Protection and Affordable Care Act and primary care utilization. *The Milbank Quarterly*, *89*(1), 69-89.

Hooker, R. S., Cawley, J. F., & Leinweber, W. (2010). Datawatch: Career flexibility of physician assistants and the potential for more primary care. *Health Affairs*, *29*(5), 880-886.

HSC. (2008). Community tracking study. Survey of Physicians. A study conducted by the Center for Studying Health System Change. Retrieved from http://www.hschange.com/index.cgi?data=04

Iezzoni, M. & El-Badri, N. (2012, September/October). The business side of healthcare practice: Retooling graduate medical students through medical school curriculum enhancements. *The Journal of Medical Practice Management*, 130-133.

Iglehart, J. (2011). Despite tight budgets, boosting U.S. health workforce may be policy that is 'just right'. *Health Affairs, 30*(2), 191-192.

Iglehart, J. (2011). The uncertain future of Medicare and graduate medical education. *The New England Journal of Medicine*, *365*(14), 1340-1345.

Improving Quality and Lowering Costs 2013. (2014). Expanding authority to bundle payments. Retrieved from http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html#2015

Improving Quality and Lowering Costs 2015. (2014). Paying physicians based on value not volume. Retrieved from http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html#2015

Ingram, H., & Schneider, A. (2007). A Social Construction Theory of Policy Design. In Theories of the Policy Process, ed. Paul Sabatier. Bellevue TN: Westview Press, 93–126.

Jackson Healthcare. (2011). Physicians evaluate the Patient Protection and Affordable Care Act (PPACA). Retrieved from http://www.jacksonhealthcare.com/media-room/surveys/physicians-on-ppaca.aspx

Jacobson, P. & Jazowski, S. (2011). Physicians, the Affordable Care Act, and primary care: Disruptive change or business as usual? *Journal of General Internal Medicine*, *26*(8), 934-937.

Kaplan, M. (2012). Patching the pipeline: Physician shortage in the U.S. *The Hispanic Outlook in Higher Education*, *23*(1), 19-21.

Keckley, P., Coughlin, S., & Stanley, E. (2013). Deloitte 2013 survey of U.S. physicians. Physician perspectives about health care reform and the future of the medical profession. Retrieved from http://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-lshc-deloitte-2013-physician-survey-10012014.pdf

Key Features of the Affordable Care Act by Year. (2014). Overview of the health care law. Retrieved from http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html

Lakhen, S. & Laird, C. (2009). Addressing the primary care physician shortage in an evolving medical workforce. *International Archives of Medicine, 2*, 1-4.

Le, K., Tahara, M., Murata, A., Komiyama, M., & Onishi, H. (2014). Factors associated to the career choice of family medicine among Japanese physicians: The dawn of a new era. *Asia Pacific Family Medicine, 13*(11), 1-8.

Medicaid-Marketplace Overview. (2014). Nevada Medicaid-marketplace overview. Retrieved from http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-State/nevada.html

Meltzer, D. & Chung, J. (2010). U.S. trends in hospitalization and generalist physician workforce and the emergence of hospitalists. *Journal of General Internal Medicine, 25*(5), 453-459.

National Health Expenditure Data. (2014). CMS National Health Expenditure Historical Data. Retrieved from http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html

Nyweide, D., Anthony, D., Chang, C., & Goodman, D. (2011). Seniors' perceptions of health care not closely associated with physician supply. *Health Affairs, 30*(2), 219-227.

Pallant, A., McGarry, K., & Tammaro, D. (2011). Challenges in primary care education. *Medicine & Health Rhode Island*, *94*(6), 158-160.

Peccoralo, L., Callahan, K., Stark, R., & DeCherrie, L. (2012). Primary care training and the evolving healthcare system. *Mount Sanai Journal of Medicine, 79,* 451-463.

The Physicians Foundation. (2014). 2014 survey of American physicians practice patterns and perspectives. Retrieved from

http://www.physiciansfoundation.org/healthcare-research/2014-survey-of-americas-physicians-practice-patterns-and-perspectives

Pierce, J., Siddiki, S., Jones, M., Schumacher, K., Pattison, A., & Peterson, H. (2014). Social construction and policy design: A review of past applications. *The Policy Studies Journal*, *42*(1), 1-29.

Preventative Services Covered under the Affordable Care Act. (2014). 15 covered preventative services for adults. Retrieved from http://www.hhs.gov/healthcare/facts/factsheets/2010/07/preventive-services-list.html#CoveredPreventiveServicesforAdults

Primary Care. (2014). Definition #3 – Primary care physician. Retrieved from http://www.aafp.org/about/policies/all/primary-care.html

Read the Law. (2014). Title III. Improving the quality and efficiency of health care. Retrieved from http://www.hhs.gov/healthcare/rights/law/

Reid, T. R. (2009). The healing of America: A global quest for better, cheaper, and fairer health care. New York, NY: Penguin Group.

Rocke, D. J., Thomas, S., Puscas, L., & Lee, W. T. (2014). Physician knowledge of and attitudes toward the Patient Protection and Affordable Care Act. *Otolaryngology–Head and Neck Surgery, 150*(2), 229–234.

Rockney, P., Donino-lenhoff, F., Welcher, C., & Robertson, R. (2010). Heath reform, primary care, and graduate medical education. *The New England Journal of Medicine, 363*(6), 584-590.

Schneider, A. & Ingram, H. (1993). The Social Construction of Target Populations. *The American Political Science Review, 87*(2), 334–346.

Schneider, A. & Ingram, H. (1997). Policy design for democracy. Lawrence, KS: University of Kansas.

Schneider, A. & Ingram, H. (2005). Deserving and entitled: Social constructions and public policy. Albany: State University of New York Press.

Schneider, A. & Sidney, M. (2009). What is next for policy design and social construction theory? *The Policy Studies Journal, 37*(1), 103-119.

Sebelius, K. (2012). We can't wait update: Advancing innovation in health care. Retrieved from http://www.hhs.gov/healthcare/facts/blog/2012/05/advancing-innovation.html

Smith, S. (2013). Determining sample size: How to ensure you get the correct sample size. Retrieved from http://www.qualtrics.com/blog/determining-sample-size/

Sproull, N. L. (1995). Handbook of research methods: A guide for practitioners and students in the social sciences. (2nded.). Metuchen, N J: Scarecrow Press.

Steinmann, A. F. (2011). Threats to graduate medical education funding and the need for a rational approach: A statement from the alliance for academic internal medicine. *Annals of Internal Medicine, 155*(7), 461-464.

Stempniak, M. (2013, March). Closing the primary care gap. *Hospitals & Health Networks*, 45-52

Sullivan, J. & Gershon, R. (2014). State fiscal considerations and research opportunities emerging from the Affordable Care Act's Medicaid expansion. *American Journal of Law & Medicine, 40,* 237-252.

Wright, D. (2011, October). Address income gap between different types of physicians. *USA Today*..

Zhu, J. & Metzler, I. (2012). Primary care physicians, an endangered species? How rising medical school debt is threatening our health care system. *Kennedy School Review, 12,* 47-49.

Appendix A: Survey Instrument

Provider's Knowledge of the U.S Health Care System and their Medical Practice Choices: A Survey of Physicians, Residents, and Non-Physician Practitioners

Personal Background

1. Are you male or female? Female Male
2. What race do you consider yourself to be? (check all that apply):

   White Black or African-American Native Hawaiian or other Pacific Islander

   Asian American Indian or Alaskan Native From multiple races Other
3. What is your age? 29 or younger 30-39 40-49 50-59 60 or older

Medical Practice Background

4. What is your highest level of medical licensure completed?

   Resident Physician

   Physician Assistant (PA)

   Advanced Practice Registered Nurse (APRN)

   Doctor of Medicine (MD)/Osteopathic Medicine (DO)
5. How long have you been a medical provider? ____ Years
6. Please indicate your current specialty or specialty of interest.

   Primary Care

   Pediatrics

   Obstetrics/Gynecology

   General Surgery

   Surgical sub-specialty (orthopedics, neurological, oncology)

Internal Medicine Specialty (Infectious Disease, Hospitalist, Emergency)

Other/Undecided

7. What is your current professional status?

   Employed by a hospital

   Practice owner/partner/associate

   Employed by a medical group

   Employed by a medical school or university

   Other (describe)

   a. If you work in a hospital, medical school, or university, in which of the following settings do you spend most of your time seeing patients?

      Office practice owned by the hospital, medical school, or university

      On hospital staff

      In the emergency room

      In a hospital or medical school clinic

      Somewhere else (Describe)

8. Has your professional status changed in the last 12-18 months?

   Yes, from owner/partner/associate to hospital employed

   Yes, from owner/partner/associate to group employed

   Yes, from group or hospital employed to owner/partner/associate

   Yes, from medical school to hospital employed

   Yes, from medical school to group employed

   No, my status has not changed

Hours Worked and Patient Visits

9. On average, how many hours do you work per week (include all clinical and non-clinical duties)? 0-20 21-30 31-40 41-50 51-60 61-70 71-80 81 or more
10. Of these, how many hours do you work each week on non-clinical (paperwork) duties only? 0-5 6-10 11-15 16-20 21-25 26 or more
11. On average, how many patients do you see per day (include both office and hospital encounters)? 0-10 11-20 21-30 31-40 41-50 51-60 61 or more

Medical Practice Characteristics

12. What percent of your patients fall into the following categories?

    ___ Medicare ___ Medicaid ___ Commercial Insurance/Private Pay

    ___ Self-pay/Cash ___ Other

13. What is your current position regarding Medicare patients?

    See all of these patients

    Limit number of these patients

    Do not see these patients

    a. If you limit or do not see Medicare patients, which of the following factors influence your decision? (check all that apply)

       Billing requirements, including paperwork, and filing of claims

       Concern about a Medicare audit

       Inadequate reimbursement

       Practice already has enough patients

Medicare patients have high clinical burden

14. What is your current position regarding Medicaid patients?

    See all of these patients

    Limit number of these patients

    Do not see these patients

    a. If you limit or do not see Medicaid patients, which of the following factors influence your decision? (check all that apply)

       Billing requirements, including paperwork, and filing of claims

       Delayed reimbursement

       Inadequate reimbursement

       Practice already has enough patients

       Medicaid patients have high clinical burden

15. What is your current position regarding private or commercially insured patients?

    See all of these patients

    Limit number of these patients

    Do not see these patients

16. Do you participate in any insurance products offered through the state/federal marketplace exchanges?

    __ Yes __ No, and I have no plans to __ No, but I am likely to

    __ Not sure

17. Do you or the physicians in your main practice routinely treat patients with chronic conditions such as asthma, diabetes, depression, or congestive heart failure? __ Yes __ No

    a. If you answered 'Yes' to the previous question, do you or does your main practice provide the following services to patients with these chronic conditions? (check all that apply):

       Written materials that explain guidelines for recommended care in English

       Written materials that explain guidelines for recommended care in languages other than English

       Nurse care managers to monitor and coordinate the care of patients with that condition

       Non-physician staff to educate patients in managing that condition

       Group visits in which patients with that condition meet with staff who provide routine medical care or address educational or personal concerns

18. Has your practice implemented Electronic Medical Records (EMR)?

    __ Yes __ No

    a. If yes, how has EMR affected your practice? (check all that apply)

       Improved quality of care

       Detracted from quality of care

       Improved efficiency

       Detracted from efficiency

       Improved patient interaction

Detracted from patient interaction

Has had little to no impact on the above

19. Which of the following best describes your current practice?

    I am overextended and overworked

    I am at full capacity

    I have time to see more patients and assume more duties

Knowledge of Health Care Delivery and Recent Reform

Please indicate your level of agreement with the following statements (20-31):

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

20. I understand the major provisions of recently enacted health care reform legislation (Patient Protection and Affordable Care Act or PPACA).

The new health care legislation has done or plans to do the following:

21. Reduce the number of uninsured.

22. Expand access to health care.

23. Increase reimbursement to primary care providers.

24. Contain health care costs.

As a provider caring for patients in Northern Nevada:

25. I understand the difference between how hospitals are paid for their services and how providers get paid for their services.

26. I know how much it costs to provide the care needed to patients in the hospital.

27. I understand the purpose of Graduate Medical Education (GME) funding to hospitals in the United States.
28. I understand the Bundled Payments for Care Improvement Initiative (BPCI), a new payment method proposed by the Center for Medicare and Medicaid Innovation (CMMI).
29. I understand the purpose of the Medicare Shared Savings Program (MSSP).
30. Understanding health policy is important to practicing medicine.
31. I believe my medical school education has provided me with sufficient health policy training.

Perspectives of Health Care Delivery and Recent Reform

32. Which best describes how you feel about the future of the medical profession?

    Very positive/optimistic Somewhat positive/optimistic

    Somewhat negative/pessimistic Very negative/pessimistic

33. Hospital employment of physicians is a positive trend likely to enhance quality of care and decrease costs.

    Mostly agree Somewhat agree Somewhat disagree Mostly disagree

34. In your opinion, which factors are most likely to contribute to rising health costs? (check all that apply):

    Defensive medicine Aging population State and federal insurance mandates

    Cost of pharmaceuticals Advances in technology/treatment End of life care Social conditions (poverty, drugs, violence, illegal immigration, etc.)

    Lack of pricing transparency Limited patient financial obligations

Absence of free markets Fraud Fee-for-service reimbursement Other Price controls on fees and products

35. In the next one to three years, do you plan to (check all that apply):

Continue as I am Cut back on hours Seek a non-clinical job within health care Retire Work locum tenens Cut back on patients seen Seek employment with a hospital Work part-time Switch to cash/concierge practice Other Close my practice to new patients Relocate to another practice/community

36. How often do you consider insured patients' out-of-pocket costs in making care decisions such as prescribing generic over brand name, deciding the types of tests to recommend, or if there is a choice between outpatient and inpatient care?

Always Usually Sometimes Rarely Never

37. In your opinion, which factors limit your ability to provide high quality care? (check all that apply):

Inadequate time with patients during office visits

Patients' inability to pay for needed care

Rejections of care decisions by insurance companies

Inability to refer to high quality specialists in your area

Not getting timely reports from other physicians and facilities

Difficulties communicating with patients due to language or cultural barriers

Patient non-compliance with treatment recommendations

Lack of outpatient mental health services in your area

38. Disease management programs are intended to reduce costs and improve quality of life for patients with chronic diseases by integrating delivery of care and involving the patient in self-care.

    Mostly agree Somewhat agree Somewhat disagree Mostly disagree

39. What overall grade would you give the Affordable Care Act (ACA) as a vehicle for health care reform?

    A B C D F

40. What kind of training do you believe would make you a more effective health care reform advocate? (free response text box)

Appendix B: Copyright Permission

Questions related to the Kaiser Foundation Survey are available for use to not-for-profit, or if materials will be used for educational purposes and the readers will not be charged for access. (http://kff.org/cite-and-reprint-kff/).

From: Paul Gorman <gormanp@ohsu.edu>
Subject: Re: Survey Instrument used in Journal
Date: August 11, 2014 8:49:34 AM PDT
To: Cora Case <cldownard@aol.com>

Here you go.
Good luck with your work.
Paul

Paul Gorman, MD
Professor
Medical Informatics and Clinical Epidemiology
Oregon Health & Science University
3181 SW Sam Jackson Park Road
Portland, OR 97239

503 494-4025

On Aug 9, 2014, at 9:52 PM, Cora Case <cldownard@aol.com> wrote:

Dear Dr. Gorman,

I am a PhD student in Public Policy and Administration with Walden University and I am in the process of writing the proposal for my quantitative dissertation on providers and residents perspectives of the formulation and implementation of the Patient Protection and Affordable Care Act. I plan on using a survey instrument to collect the data and was in search of an existing instrument when I came across the journal titled "Healthcare reform and the next generation: United States medical student attitudes toward the PPACA".

I am writing to request the actual survey instrument used in the journal as well as permission to use the instrument with modifications in my study.

Thank you for your assistance.

Cora Case
775-232-0458

Teri Armstrong <TArmstrong@mathematica-mpr.com>
12/8/14

to me
Hi Cora,

Please feel free to use the information from the “2008 HSC Health Tracking Physician Survey.” There’s no need to complete any forms.

Thanks for checking.

Sincerely,

Teri

_____

Teri Armstrong
Manager, Proposal Support
Mathematica Policy Research
1100 1st Street, NE, 12th Floor
Washington, DC 20002-4221
Phone: 202-484-3290
Fax: 202-863-1763
tarmstong@mathematica-mpr.com

From: Cora Case [mailto:cora.case@waldenu.edu]
Sent: Saturday, December 06, 2014 11:26 PM
To: Jacqueline Allen
Subject: Request permission for use of survey questions in Dissertation

Hello, I am currently pursuing my PhD in Public Policy and Administration with emphasis in Health Policy with Walden University. My quantitative study will be attempting to learn if there is a relationship between providers' knowledge of the U.S. health care system and their medical practice choices. I will be administering the survey to physicians, residents, and non-physician practitioners located in Northern Nevada. I would like to request permission to use about 25 of the questions that were used in the "2008 HSC Health Tracking Physician Survey". Please let me know if I need to fill out any additional documentation or reply to me via email that I have approval to use the survey questions in my study.

Thank you,

Cora Case
From: Tim Norbeck <tnorbeck@comcast.net>

Date: Sun, Feb 8, 2015 at 5:12 PM
Subject: Re: Request permission for use of survey questions in Dissertation
To: Cora Case <cora.case@waldenu.edu>

You may feel free to use questions from the 2014 Physician Foundation survey with appropriate attribution. Good luck to you in pursuing your PhD! Best regards, Tim Norbeck

Sent from my iPad

On Feb 8, 2015, at 7:22 PM, Cora Case <cora.case@waldenu.edu> wrote:

Hello, I am currently pursuing my PhD in Public Policy and Administration with emphasis in Health Policy with Walden University. My quantitative study will be attempting to learn if there is a relationship between providers' knowledge of the U.S. health care system and their medical practice choices. I will be administering the survey to physicians, residents, and non-physician practitioners located in Northern Nevada. I would like to request permission to use some of the questions that were used in the "2014 Survey of American Physicians Practice Patterns and Perspectives". Please let me know if I need to fill out any additional documentation or reply to me via email that I have approval to use the survey questions in my study.

Thank you,

Cora Case

Appendix C: Protecting Human Research Participants Certificate of Completion

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Cora Case** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 12/19/2011

Certification Number: 818100

Appendix D: SurveyMonkey Email to Participants

From: survey-noreply@smo.surveymonkey.com [mailto:survey-noreply@smo.surveymonkey.com] **On Behalf Of** cora.case@waldenu.edu via surveymonkey.com
Sent: Tuesday, May 19, 2015 10:41 PM
To:
Subject: Doctoral Student Research Request to Participate in Survey Study of Providers in Northern Nevada

Participation in Survey Requested to Complete Dissertation Study

Consent Letter to Participate

Dear Provider,

You are invited to take part in a research study examining the relationship between a provider's knowledge of the U.S. health care system and their medical practice choices. The researcher is inviting credentialed and employed providers of the Renown medical staff as well as resident physicians enrolled at the University of Nevada School of Medicine to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

A researcher named Cora Case, who is a doctoral student at Walden University, is conducting this study. The researcher's chair is Dr. Lydia Forsythe, PhD. You may email the chair at Lydia.Forsythe@Waldenu.edu. Ms. Case is seeking your participation to complete a dissertation study.

Background Information: The purpose of this study is to examine and develop information on how providers' knowledge of the U.S. health care system influences their subsequent medical practice choices. You were invited to participate in the study because of your status as a provider in Northern Nevada and your practical experience working in health care. Your participation in the survey is confidential.

Procedures: If you agree to be in this study, you will be asked to:

Answer 36 questions through an online survey that will take about 15 minutes to complete.

Here are some sample questions:

____What is your current position regarding Medicaid patients?
____I know how much it costs to provide the care needed to patients in the hospital.
____In your opinion, which factors are most likely to contribute to rising health costs?
____What overall grade would you give the Affordable Care Act (ACA)?

Voluntary Nature of the Study: Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. If you decide to join the study now, you can still change your mind during the study. If you feel stressed during the study, you may stop at any time. You may skip any questions that you feel are too personal.

Risks and Benefits of being in the Study: There are no foreseeable risks associated with this study. The associated benefit to you, for taking part in this study, is that you are providing information that can be shared with policymakers, who in turn help influence decision making as it relates to policies, education, and training in health care delivery.

Payment: There is no compensation for participating in the study.

Privacy: Any information you provide will be kept confidential. The researcher will not collect or use your personal information for any purposes outside of this research project. Data obtained will not include personal information and will be locked in a secured file. The researcher will preserve the file in accordance with IRB requirements and will shred after meeting the retention requirements. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions: You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at Cora.Case@Waldenu.edu or 775-232-0458. If you want to talk privately about your rights as a participant, you can email irb@waldenu.edu. Walden University's approval number for this study is 04-21-15-0234509 and it expires on April 20, 2016.

In order to protect your privacy signatures are not being collected. Completion and submission of the survey implies that you have read the information in this form and consent to take part in the research.

Please keep this consent form for your records or future reference.

To begin the survey click on the link below:

Begin Survey