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## Public Health Care Policies and Their Impact on Patient Satisfaction

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College of Social and Behavioral Sciences

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Walden University  
2020

Abstract

Public Health Care Policies and Their Impact on Patient Satisfaction

by

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MBA, California Coast University, 2010

BS, California State University, 2006

AS, Edison College, 2000

Dissertation Submitted in Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy  
Public Policy Administration

Walden University

May 2020

## Abstract

Health care is a trillion-dollar industry, but without public policies in place to support a sustainable health care system, life would decline. For instance, health care providers now receive decreased payments from federal agencies if their health facility scores do not meet national benchmarks. The purpose of this retrospective, quantitative, comparative study was to examine the extent to which patient satisfaction was impacted by national public health policies in the United States and Canada. The research questions related to how health care reimbursement policies and patients' financial responsibility of both the eastern United States and eastern Canada would predict country-specific patient satisfaction scores for people 55 to 75 who had a medical procedure in the past 2 years. The independent variables were public policy and financial responsibility and the dependent variable was patient satisfaction. Linear regression only slightly validated the original hypotheses, so logistic regression was utilized for a more detailed interpretation. Using logistic regression analyses with 164 participants, higher satisfaction scores predicted higher satisfaction in the United States ( $B = 1.95$ ,  $\text{Wald}[1] = 13.47$ ,  $p < .001$ ) based on shorter wait times for medical procedures and obtaining results, and higher satisfaction scores in Canada ( $B = 1.94$ ,  $\text{Wald}[1] = 13.60$ ,  $p < .001$ ) based on the reduced cost associated with medical treatments. The results of this study may be applicable to other locations that face health care reform challenges, promoting positive social change for patients seeking better satisfaction with their health care services.

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## Dedication

This doctoral dissertation is dedicated to my grandparents, Charles Jacob Ziel and Mildred Greta Trabant, who taught me that with hard work, dedication, and perseverance, I could achieve anything I wanted in life. Thank you for always being there and believing in me; your inspiration and motivation galvanized me to pursue my dream of becoming a doctor.

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## Chapter 1: Introduction to the Study

Health care is a global, trillion-dollar industry that impacts everyone, as it is necessary to ensure a long healthy life. Without adequate health care policies in place, human well-being can decline (Shi et al., 2013). However, it is often challenging and expensive to obtain. But people prefer easy, convenient access to affordable health care and want to be both physically and mentally satisfied with the health care they receive. Substantive research on public health care public policies has suggested a global need for understanding positive patient satisfaction in the health care industry (Fenton, Jerant, & Bertakis, 2012), especially because patient satisfaction is directly related to the utilization and reimbursement of medical procedures through the Patient Protection and Affordable Care Act (ACA) and Canada Health Act (CHA). For the purpose of this study, I addressed these two primary public policies that influence the health systems of both Canada and the United States, focusing on unreimbursed government health care services in connection with decreased patient satisfaction scores.

### **Background**

The ACA was passed in 2009 in the United States to focus on the delivery, affordability, portability, and accessibility of health care and to align medical services reimbursement with patient satisfaction scores in the United States (Street et al., 2014). Similarly, the CHA was passed in 1984 in Canada to address the delivery, comprehensiveness, administration, universality, portability, and accessibility of health care services (Husereau, Culyer, Neumann, & Jacobs, 2014). Both these public policies, which contribute to and help establish health care laws, are designed to facilitate and

deliver care to patients; however, they do not measure patient satisfaction. But these policies impact health care in the United States and Canada and influence how patients rate their overall levels of satisfaction, which can affect government reimbursement for service providers.

Both public policies have influenced their respective nations in their approach to the delivery of health care. However, unlike Canada, the United States has some of the highest health care costs in the world. In America, good health is generally perceived as something that requires purchase (Kennedy, Tevis, & Kent, 2014). This may be attributed to the fact that public policies influencing health care in the United States are structured differently than those of most industrialized nations (Kennedy et al., 2014). The ACA in the United States has been referred to as a fee-for-service system, because payment is expected for all types of care provided. In the United States, hospitals and medical centers are proportionally reimbursed depending on how their facility scores on government surveys that focus on patient satisfaction with their recent health care experience; in Canada, reimbursement is paid directly to medical care facilities regardless of the patient's overall level of satisfaction. Further, the ACA mandate that lowered Medicare reimbursements based on patient satisfaction has been disproportionately higher than expected (Geiger, 2012). For decades in the United States, health care services have focused solely on providing quality care at an affordable price; however, providers have rarely focused their attention on patient satisfaction (Zimmermann, Michaelis, Quaschnig, Muller, & Korner, 2014).

The public policies in the United States are further complicated in that each state has different health care reform policies (Boivin, Lehoux, Burgers, & Grol, 2014). Commercialization, advanced technology, and a largely open-ended fee-for-service insurance payment system have produced many challenges for national health care reform (Kennedy et al. 2014). Legislators in many individual states have failed in their attempts to implement specific, universal policies for health care coverage. Therefore, policymakers in individual states must look to the federal government for help in providing adequate health coverage while promoting positive social change for their constituents. Adequate health coverage is necessary, as patient satisfaction is important to health care providers' success in receiving financial reimbursement from the government. Thus, hospitals may need to shift their overall focus from measuring quality trends to focusing on implementing adequate patient satisfaction policies (Esselman, White, & Chimes, 2013). The purpose of hospital policies should be to achieve a new set of performance metrics that include measuring patient satisfaction (Maki, Krishnan, Castillo, & Guss, 2014).

Patient satisfaction is measured in many different ways, using constraints including appropriate patient care, clinical outcomes, mortality, morbidity, underuse of necessary care, functional status, and health status (Kravitz, 1998). However, satisfaction in health care is important to assess from the patient's perspective, as improving individuals' health is the primary reason many people work in health care professions. The concept of patient satisfaction comprises patients' perceptions, beliefs, and viewpoints (Iseli, Kunz, & Blozik, 2014).

The majority of health care research has addressed the accessibility and affordability of health care in the United States rather than focusing on patient satisfaction (Lyu, Cooper, & Freischlag, 2013). Little research has been conducted to determine the overall satisfaction levels of patients who use the American health care system (Winter & Munn-Giddings, 2013). Research has also not addressed factors associated with determining the level of patient satisfaction after health care services at the government level in the United States or Canada. The United States and Canada have remarkably different pathways for financing and delivering health care to their residents (Husereau et al., 2014), but a comparative study addressing which patients are most satisfied has not yet been conducted. Therefore, the primary purpose of this study was to address how varying government public policies influence patient satisfaction levels. These levels are subjective; for example, a patient who receives unsatisfactory care but possesses low standards may report similar satisfaction levels as a patient who receives satisfactory care but whose standards are high (Kravitz, 1998).

### **Problem Statement**

There is a problem in health care in the United States in terms of health care facilities receiving decreased payments from the government for health care services provided based on the ACA provision for patient satisfaction. Health care providers receive decreased payments from the Centers for Medicare and Medicaid Services (CMS) if their facility scores do not meet national satisfaction benchmarks and increased payments from CMS if their facility scores exceed national satisfaction benchmarks (CMS, 2010). Further, 30% of a medical center's total performance score is based on



Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) ratings, which has a significant financial impact for service providers (Elliot et al. 2016).

Overall, the two primary public policies that influence health care in both Canada and the United States may influence how patients rate their overall levels of satisfaction.

Therefore, further research like this study is necessary to address a lack of research on the differences between national health care policies regarding patient satisfaction as a condition of government reimbursement to health care providers.

### **Purpose of the Study**

The purpose of this quantitative, comparative, correlational study was to examine the extent to which federal reimbursement impacts patient satisfaction regarding the two primary public health policies that affect residents of the United States and Canada.

Federal reimbursement was defined as money that the government pays to states to provide public services, and patient satisfaction was explained as an enjoyable feeling due to something positive that has happened to someone. The public health policies addressed in this study were the ACA and the CHA. Public health care policies that dictate national patient satisfaction standards are becoming a top priority, as satisfaction scores are now an essential part of the federal reimbursement process (Husereau et al. 2014).

The factors under investigation in the present study were the American and Canadian public health policies that may influence patient satisfaction. Significant decreases in overall quality of care and access to care, as well as nonfavorable health outcomes, have been associated with decreased levels of patient satisfaction within both

the United States and Canada (Leiyu et al. 2013). Both the United States and Canada have only one primary federal law concerning their respective health care policies, and both laws direct lawmakers to establish additional regulations based at the state and local levels of government. By examining the primary public health policy of each country and its impact on patient satisfaction as a result of the implementation of the CHA and the ACA, I attempted to identify whether a correlation exists between high patient satisfaction and a particular health care system.

### **Research Questions**

The independent variables (IVs) for the present study are public policy and financial responsibility; the dependent variable (DV) was patient satisfaction.

RQ1: How well do the healthcare reimbursement policies of the United States and Canada predict country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years?

*H<sub>0</sub>*: Healthcare reimbursement policies of the United States and Canada do not significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

*H<sub>1</sub>*: Healthcare reimbursement policies of the United States and Canada do significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

RQ2: How well does the financial responsibility of patients in the United States and Canada predict country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years?

$H_0$ : The financial responsibility of patients in the United States and Canada does not significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

$H_1$ : The financial responsibility of patients in the United States and Canada does significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

### **Theoretical Framework**

This quantitative, comparative study addressed patients' overall levels of satisfaction after receiving medical services. The most appropriate framework for evaluating this criterion was decision theory, which is often referred to as the theory of choice. Lehmann (1950) described decision theory as a grounded foundation that leads to a stochastic approach for behavior in an uncertain environment. Decision theory is useful in terms of identifying the values of human behavior (Lehmann, 1950), which applied to the present study because human behavior values determine patients' overall satisfaction. For the purpose of this study, I used a deterministic theoretical approach to focus on a medical patients' decision to feel or not feel satisfied.

I used decision theory literature to examine the public policies that influenced patient satisfaction, which may have implications for future public policies. This study was grounded in scientific literature and focused on the two primary health care policies of the United States and Canada, with attention to how they impact patient satisfaction. Positive patient satisfaction was an essential outcome of health care experiences, as not all health care policies are equal regarding the comfort and satisfaction of patients (O'Brien & Shea, 2011). This study allowed for an in-depth look at the causes, effects, and consequences of the decision-making process for satisfied and unsatisfied patients in two similar regions.

### **Nature of the Study**

This public policy study was a nonexperimental, quantitative, comparative study focused on examining the health care policies that influence patient satisfaction in two separate industrialized nations: the United States and Canada. This study targeted adults aged 55 to 75 living in eastern Canada and the eastern United States who received health care services within the last 2 years at a hospital, medical center, or surgical center. Only a few studies have been conducted on public health policies that impacted patient satisfaction and how patients perceived the quality of health care services in both the United States and Canada (Kamimura et al., 2014).

I collected patient satisfaction data from participants using an approved survey for HCAHPS and CAHPS (see Appendix A), which are divisions of CMS. Survey questions from HCAHPS and CAHPS are published in the public domain, which makes them available for use without permission. Participants actively acknowledged their consent to

take the online survey by clicking the link to take the survey, and each participant took the survey anonymously. The subject population consisted of a minimum of 75 subjects from each nation; I deemed this sample size valid by using G\*Power 3 computer software to determine the minimum sample size. To respect anonymity, the survey was completed anonymously and only included screening questions regarding the patient's age and geographic location. I analyzed the quantitative data results to determine which public health system had the highest level of patient satisfaction overall.

This study methodology comprised a data collection process, a complete data analysis, and an interpretation of the collected data that reflects a representation of the subject population. For the purpose of this study, I measured the indicators relevant to the hypotheses regarding patient satisfaction and identified these factors by collecting post-medical care survey scores, using a cross-sectional design methodology.

### **Definition of Terms**

This section provides definitions of the terms and acronyms used throughout this dissertation, which will assist the reader in understanding the content of this research.

*Accountable care organizations (ACOs):* Networks of providers, hospitals, physicians, and medical centers that agree to share the responsibility for providing a defined population with quality health care (Koh & Sebelius, 2010).

*Canadian Community Health Survey:* A cross-sectional survey tool that gathers health-related data from medical patients to provide feedback regarding their recent health care experience at a Canadian medical facility (Veillard, Fekri, Dhalla, & Klazinga, 2016).

*Canadian Institute for Health Information:* An independent, nonprofit organization that provides information regarding Canada's health system. It uses a broad range of health databases, measurements, and standards—together with evidence-based reporting and analysis—to establish public policy decision-making (Veillard et al., 2016).

*Canadian Public Health Standards Committee:* A federal committee based in Ontario, Canada, which is dedicated to establishing core competencies for health education programs, professional development programs, and evidence-based public health research programs (Brassolotto, Raphael, & Baldeo, 2013).

*Canada Health Act (CHA):* A law passed in 1984 to focus on the delivery, administration, comprehensiveness, universality, portability, and accessibility of health care for all residents in the nation of Canada (CHA, 2018).

*Centers for Medicare and Medicaid Services (CMS):* An agency located in Baltimore, Maryland that operates within the U.S. Department of Health and Human Services. It is responsible for the administration of federal health care programs in the United States (CMS, 2018).

*Community-based participatory research program:* A program that supports collaborative research efforts to address diseases and conditions disproportionately affecting health disparity populations throughout Canada (Cacari-Stone, Wallerstein, Garcia, & Minkler, 2014).

*Department of Health and Human Services:* A cabinet-level department of the U.S. federal government with the specific goal of protecting the health of all Americans

and providing essential human services to the population (U.S. Department of Health and Human Services, 2018).

*Electronic health record*, also known as an *electronic medical record (EMR)*: An electronic version of a patient's medical history. This record is maintained by the medical provider and includes a patient's clinical data, such as their demographics, symptoms, problems, medications, and progress notes (Street et al., 2014).

*Emergency Medical Treatment and Active Labor Act*: A federal law that requires anyone coming to an emergency department to be stabilized and treated, regardless of their insurance status or ability to pay, but since its enactment in 1986 has remained an unfunded mandate (CMS, 2018).

*Financial responsibility*: The process of managing money and other similar assets in a way that is considered productive and is also in the best interest of the individual, the family, or the business company responsible for the funding (International Finance Reporting Standards, 2017).

*Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)*: The first national, standardized, publicly reported survey of patients' perspectives of their recent medical care. This quality improvement survey instrument collects data by measuring a patient's level of satisfaction; this score determines the level of reimbursement a medical center receives from the U.S. federal government (CMS, 2018).

*Hospital value-based program*: Part of the CMS system that links Medicare's payment system to a value-based health care quality system. Hospitals and medical

centers are financially reimbursed based on their overall quality of care scores, detailed in Section 3001(a) of the ACA (CMS, 2018).

*Inpatient quality reporting program:* This type of program gives hospitals a financial incentive to report the quality of their services while providing CMS with the data to help consumers make more informed decisions about their health care (CMS, 2018).

*Lalonde Report:* A report produced in Canada in 1974 that offered a new perspective on the health of Canadians. It proposed the concept of the health field, which identified two main health-related objectives: the overall health care system and the prevention of health problems for the promotion of good health (D. Cohen et al., 2014).

*Medicare:* The federal health insurance program in the United States for people aged 65 or older, people under the age of 65 with disabilities, people with end-stage renal disease, and people in hospice care. This federal public policy program subsidizes the cost associated with medical treatments and reduces the burden placed upon taxpayers (CMS, 2018).

*Medicaid:* The federal health insurance program that provides public health care coverage to low-income residents, undocumented residents, children, pregnant women, seniors, and individuals with disabilities (CMS, 2018).

*Patient Protection and Affordable Care Act (ACA):* A federal law that was signed in 2010 and allows consumers to oversee their health care decisions. Under the ACA, a new Patient's Bill of Rights provided the American people the stability and flexibility



they need to make informed choices about their health care (U.S. Department of Health and Human Services, 2018).

*Patient satisfaction:* The level of comfort and fulfillment that a patient in a health care setting feels during a medical procedure. Satisfaction is an important and commonly used indicator for measuring the quality and performance of health care facilities (National Institutes of Health, 2018).

*World Health Organization:* An international health organization that works alongside 150 different federal governments and other partners to build a healthier future for people all over the world (Hannon et al., 2013).

### **Assumptions**

One assumption present in this study was that the surveyed population answered the survey questions truthfully and accurately based on their own experiences. Further, this study was based on an understanding that people in specific geographic areas may receive better health care in systems using federally funded reimbursement programs as opposed to those with no federally funded reimbursement programs. Another assumption was that patients in the United States are more satisfied than the patients in Canada based on shorter wait times for medical procedures. However, I expected patients in Canada to be more satisfied than patients in the United States based on the reduced cost of medical treatments.

### **Limitations**

This study was limited in two ways. First, the survey was only eligible for adults aged 55 to 75 living in the eastern United States or eastern Canada (Eastern Standard

Time Zone only) who have received health care services or treatments within the last 2 years. Second, the collected data was limited only to those recipients who have access to the Internet, took the online survey, and submitted their results to be calculated. Additionally, the participants possibly expressed bias and perceptual misrepresentations based on their own medical experiences from various health care providers and persons in other settings.

### **Scope and Delimitations**

This study included only publicly available documents, including peer-reviewed studies and gray literature documents, as sources for review. I only included published literature related to health care public policies focused in the United States and Canada in this research study. I chose to only include English language documents in this research study, even though some Canadian research was published in French. This study was also delimited to the population of residents living in the eastern region of Canada and the eastern region of the United States, specifically in the Eastern Standard Time Zone only. The results of this study were valid based on comparing the specific eastern regions of both countries in which the primary studies were conducted and analyzed.

### **Significance**

In the United States, the ACA implemented patient satisfaction as a financial factor in terms of proportional CMS reimbursement. Starting in 2014, the hospital value-based program would link a portion of the hospital's payment from CMS to patient satisfaction on a set of quality measures (Iseli et al., 2014). Measuring and reporting patient satisfaction has now become an important financial issue due to this public policy.

Further, patient satisfaction is now incorporated into the report structures for both hospital quality data and medical centers' data collection methods (Kravitz, 1998). Patient satisfaction has therefore taken on a new meaning and role in terms of financial reimbursement. However, for successful implementation of patient-centered care, the needs and expectations of patients must be taken into consideration. This process includes both the treatment process and the decision-making process for patients and their family members.

The potential significance of this study is that it may provide hospitals and medical centers in the United States with the information necessary to improve patient satisfaction and thereby receive adequate federal reimbursement to properly operate and maintain a medical facility. For instance, most patients in the United States are satisfied with post-anesthesia care (Royse, Chung, Newman, & Stygall, 2013); however, little research has been published that addresses overall posttreatment care. Most recently published health care research in the United States has focused on national integration, advanced technology, and insurance payment systems but has not frequently addressed patient satisfaction, which is an essential outcome for patient-centered treatment (Zimmermann et al., 2014). As studies on government funding levels in connection with patient care and patient satisfaction have rarely been conducted before, these results may facilitate new ideas, policies, innovations, and solutions for current medical dilemmas. Further, research concerning public health policies is necessary, as delivery of care is a significant portion of the global service economy (Maki et al., 2014). Thus, the present study is unique because it addresses an under researched area of medical science, which

is significant not only for its financial aspects but also because unsatisfied patients tend to avoid going to a hospital, which creates additional costs for delayed medical treatments.

### **Social Change**

Social change refers to the transformation of cultures, behaviors, social structures, and social institutions. Public health care policies in both the United States and Canada have been examined by many experts, which suggests that there is a global need for increased understanding of positive patient satisfaction in health care. A patient's level of satisfaction is directly related to the experience they had with their health care services; therefore, this topic needs to be explored in more detail, which this study addresses. Determining a connection between patient satisfaction and specific public health care policy may influence legislators to enact a similar policy, promoting positive social change and better health and satisfaction for their patients.

### **Summary**

The ACA has incited significant changes to the public health care system in the United States. Health care reimbursement is now directly linked to patient satisfaction scores and is paid out accordingly through HCAHPS. Determining medical patients' levels of satisfaction is a new process for the United States federal government. Since the implementation of the CHA, Canada has established a social, government-provided health care system that may or may not be satisfying to patients who receive medical care. For the purpose of this dissertation, I analyzed these primary public policies and the patient satisfaction levels to determine which country appears to be more satisfied with its health care services and to assess the relationship between financial reimbursement

and patient satisfaction. Health care policies that impact patient satisfaction in both the United States and Canada have not yet been given enough attention to understand positive patient satisfaction in health care.

Chapter 1 included an overview of the study and insight into its theoretical base and methodology. Chapter 2 provides a review of extant published literature relevant to this study. Chapter 3 details the methodology used to collect and analyze the data and to answer the research questions. Chapter 4 describes the analyzed findings of the collected survey data. Finally, Chapter 5 presents the overall results and interpretation of the findings while presenting recommendations for future action and social change implications.

## Chapter 2: Literature Review

### **Introduction**

This literature review includes the history and examples of health care public policies pertaining to patient satisfaction, which provided evidence for the need for further research. The review includes articles, books, and journals related to the public policies affecting patient satisfaction and federal reimbursement for health care procedures and services completed at hospitals, surgical centers, and medical centers in the United States and Canada. Limited research has addressed public policies or health care legislation in relation to patient satisfaction in both the United States and Canada.

### **Research Strategy**

I researched peer-reviewed articles using databases through the Walden University Library and Google Scholar. I also accessed published resources listed by Health Affairs Journals, which are focused on public policy issues involving health care. I searched for studies conducted in either the United States or Canada and containing the terms *health care*, *public policy*, and *patient satisfaction*. I did not place any restrictions on health care articles regarding publication date or location but primarily focused on articles published within the last 5 years. I restricted article inclusion to those involving public policies and health legislation in both the United States and Canada that were published in English.

### **Public Health Policies of the United States**

The health care system in the United States is structured differently than the health care system in Canada, with significant differences in legislative public policies

and finance. One of the first goals of the ACA was to promote preventative medicine throughout the United States. Too many Americans were not reaching their full potential of health due to preventable conditions (Koh & Sebelius, 2010). The ACA responded to this concern by placing a strong emphasis on disease prevention and adding increased funds and initiatives to improve the overall health of the public. Title IV of the ACA focuses on promoting prevention and improving the public's overall health. Focusing on preventative medicine may reinvigorate the general public and improve prevention across each level of society (Koh & Sebelius, 2010). Thus, the ACA brought in a new era of preventative medicine that can improve the overall health of a community. The ACA brought a new capacity to handle the surge in demand for preventative health services by including provisions for preventative medicine for all diagnostic and primary care through local health departments (Valdmanis et al., 2014). Individual state spending on preventative medicine services has been limited, but the ACA can help to fund such public policy measures once these measures are more clearly defined (Valdmanis et al., 2014).

The impact of public policies on consumer-driven health care has also changed since the signing of the ACA. The ACA focused on changing the tax policy of the United States by reducing high-deductible insurance plans, encouraging better transparency regarding provider quality and pricing, and supporting the use of health savings accounts for patients (Herzlinger, 2008). The primary focus of implementing federal health care policies was to decrease overall costs, improve clinical transparency, reduce the fragmentation of payments, innovate medical technology, increase the number

of health care workers, and decentralize the entire American health care system (Herzlinger, 2008).

Further, federal, state, and local laws all impact the health status of a population; therefore, it was necessary to develop policies within all levels of government to properly address the conditions that may negatively affect the public health of a community. Health care public policies are an important force that shapes the health care system and that they establish the basic rules that influence the decisions of national and regional entities to enter or exit the health care marketplace (Solomon, 2010). The public policies that influence the health of a community can also impact other policies that affect income, housing, education, food and nutrition, and the environment in which people live. Thus, the changes brought forth through the ACA improved community health in two primary ways: by promoting activities that support community and individual health efforts to improve the overall health of a large population and by eliminating or reducing unhealthy conditions of a community (Carman et al., 2013; Solomon, 2010).

Though the ACA has brought positive changes, since the ACA was passed in 2009, patient satisfaction is now connected directly with public policy. Because of the ACA, reimbursement of health care has transitioned from a fee-for-service model to an outcome-based model paid based on HCAHPS and CAHPS patient satisfaction scores (Esselman et al., 2013). Under the ACA, hospitals receive financial performance-based bonuses or penalties based on a primary set of measures set by CMS that relate to patient satisfaction (Maki et al., 2014). With reimbursement from CMS now being directly



proportioned to patient satisfaction scores, successful health care facilities must balance funding from both the government and private payers to meet their budgets.

Despite the importance of patient satisfaction to funding, few studies have been focused on patient satisfaction in the United States or how patients perceive the quality of their health care services (Kamimura et al., 2014). Previous health care research has shown that most patients seem to be satisfied with the health care treatments they received, but there needs to be more exploration on why the rest of patients remain unsatisfied (Newman & Stygall, 2013; Royse et al., 2013). Though research has provided information on how to conduct health care surveys that evaluate practitioners and service users in health care settings, these have rarely been incorporated (Winter & Munn-Giddings, 2013). Additionally, most public policies in the United States that affect the general health of the population are not aligned with patient satisfaction and only focus on the delivery and quality of patient care. But patient satisfaction provides a measure of a hospital's ability to provide good service as a part of the overall patient experience (Lyu et al., 2013), and quality care promotes positive patient satisfaction, which leads to a better chance of obtaining reimbursement through the ACA. In accordance with ACA guidelines, if patient satisfaction scores decrease, then reimbursement to the medical facility decreases as well. Therefore, patient satisfaction is the key to an integrated, patient-centered system that aligns physicians and patients together in the decision-making process (Zimmermann et al., 2014).

## **Patient Satisfaction**

To address issues with patient satisfaction, the U.S. health care reform process is endeavoring to expand health care coverage and improve health systems to better deliver high patient satisfaction. Based on a survey of patients who recently received medical treatments in the United States, 56% were completely satisfied or very satisfied with their medical treatment (Blendon, Benson, & Hero, 2014). Additionally, Americans 65 years of age or older were significantly more likely to trust their physicians than younger-aged Americans, and men (69% favorable) appeared to like their physicians more than women (54% favorable; Blendon et al., 2014). Further, low-income family patients (defined as families with annual incomes of less than \$30,000) were significantly less trusting of physicians and were less satisfied with their medical care (Blendon et al., 2014). This suggests that patient satisfaction may be influenced by both age and gender; therefore, further research is necessary to determine why certain demographics are more satisfied than others and why. Further, research has also indicated that socioeconomic disparities among patients can cause different levels of satisfaction across patient populations.

Research has also addressed different perspectives on complex issues through health care-related levels of satisfaction using medical evidence. For example, Carman et al. (2015) explained that patients were most satisfied when they were involved with their own medical decisions, made aware of the medical evidence, allowed to incorporate their own personal preferences, and kept informed of their prognosis. Patients reported the highest levels of satisfaction when they felt that they were as much involved with their health choices as their physician was. The two most significant factors that affected

patient satisfaction were the mode of interaction with the physicians and staff at a medical center and overall length of stay at a hospital (Carman et al., 2015). Therefore, it is important to address these factors to enable medical centers and hospitals to meet the demands of HCAHPS implications.

Hospital performance has also been a key influencer of patient satisfaction in the sense that a competitive health care market raises the overall level of care quality (Bloom, Propper, Seiler, & Reenen, 2015). In health care markets in which a hospital was in direct competition with another hospital, the quality of care drastically improved and resulted in increased staff participation (Bloom et al., 2015). When a rival hospital opened in proximity to an existing medical center, the original facility significantly improved their performance and increased the survival rates of their emergency room patients (Bloom et al., 2015). With HCAHPS, all medical facilities are required to post their satisfaction data online, which may drive a need for improved services (Bloom et al., 2015).

Patients are also demanding a more engaged process, including communication between physicians and family members, to improve overall levels of satisfaction. Patient engagement offers a better pathway toward more efficient care and improved overall health of the population (Carman et al., 2013). The ACA allows for patient engagement to better incorporate organizational design, policy making, and governance into preventative medicine initiatives. Additionally, collaboration between public health organizations and ACOs allows practitioners to determine the barriers to positive patient satisfaction (Ingram, Scutchfield, & Costich, 2015). By allowing public health

organizations to partner with local community organizations to reach the most vulnerable patients, patient satisfaction levels can increase for these types of medical patients.

Health care policies being incorporated into the quality reports of hospitals, medical centers, and health plans can better achieve satisfaction (Kravitz, 1998).

Physicians can also influence medical associations, certification societies, and even lobbyists regarding health care legislation that affects patient satisfaction. Federal agencies should continue to work with physicians to better obtain their opinions on what they perceive to be quality patient satisfaction. Similarly, physicians can continue to speak with patients to evaluate their comfort with physicians. Patients integrate satisfaction indicators into speaking with physicians, and physicians can take that information and pass it on to public policymakers (Corrigan & Watson, 2003). However, when it comes to measuring patient satisfaction, it is unknown to what degree patients are satisfied with the services they received (Marsh et al., 2013). The best method to evaluate patient feedback is debatable, as researchers have used different methods to obtain this and have been successful. An online or web-based model for collecting feedback from patients has the highest number of returned responses compared to telephone calls and one-on-one visits (Marsh et al., 2013). For example, a survey on patient satisfaction regarding services from free clinics—clinics that provide health services using mostly volunteers as staff—indicated that patients wanted additional social support, interpreter services for speakers of other languages, and health education programs to the local community (Kamimura et al., 2014).

Community health workers also play a key role in the well-being of communities and patients' overall levels of satisfaction. Community health workers are perceived as public figures that help their communities thrive. (Perez & Martinez, 2008). Most social services and public policies begin as community discussions among various health care workers. The role of a public community health worker is to connect people to vitally needed health care services while assisting the public with their environmental, social, economic, and political rights (Perez & Martinez, 2008). Community health workers use public policy initiatives to promote causes, which has a positive impact on a community's level of social justice satisfaction. Medical patients seem to be most positively satisfied when they are interacting with their local community health workers, which helps influence public policy decision-makers about current legislation (Perez & Martinez, 2008). Patients who are able to help determine new public legislation through providing feedback on their satisfaction levels may feel a sense of pride in knowing that they had the opportunity to influence public health care policies. Therefore, community health workers can improve the overall patient satisfaction of a community.

### **Influence of Public Policy Changes Like the Affordable Care Act**

The ACA has incited change in the field of health care regarding the measuring and reporting of patient satisfaction. With low patient satisfaction levels, people are more likely to avoid seeing a doctor and put their health at risk with the possibility of premature death (Shi et al., 2013). Additionally, access to primary health care is different for communities, causing a discrepancy in terms of patient satisfaction (Shi et al., 2013). Communities that do not have the proper health policies in place to assist with the well-

being of the community have poorer health and satisfaction levels (Shi et al., 2013).

However, the ACA has extended public health coverage of poor communities to better engage that population with health education and increase the overall health of the community.

The ACA has also placed new emphasis on long-term illnesses and chronic diseases such as heart disease, epilepsy, and diabetes. Patients who had heart disease have indicated that factors involved in patient satisfaction include the size of the hospital, how busy the hospital was, and its mortality rates (Kennedy et al., 2014). Satisfaction levels among epilepsy patients has also shown additional factors—such as the delivery of care, patient expectations, attitudes of staff, and the nosocomial infection rates— influence satisfaction levels (Weibe et al., 2014). With the increasing of federal funds for chronic diseases and long-term illnesses through the ACA, patients have a better chance of receiving the proper health care they need (Weibe et al., 2014). Additional research into the public policies that affect both the education and communication of health care patients may assist with improving the overall satisfaction of medical recipients.

Policies like the ACA can also affect the delivery of health care such as emergency room treatments, which are a significant proportion of the U.S. service economy and constitutes one of the most challenging fields in which to deliver service (Maki et al., 2014). For instance, new emergency room measures that must be examined and recorded must be submitted to a third-party vendor, such as Press Ganey, to be analyzed (Maki et al., 2014). The survey metrics are then submitted to the federal government as a service process that aligns patient satisfaction to potential

reimbursement. The higher the likelihood of recommending a positive rating, the higher the level of satisfaction reported by patients (Maki et al., 2014). The scores and feedback received from these medical care recipients can assist hospitals in redesigning the emergency room to offer a suitable, affordable, and available treatment area for people with a medical emergency. This approach frees up emergency departments to streamline their throughput process and possibly improve the overall health of a community (Maki et al., 2014).

One of the other ways public policies have influenced health care is regarding the use of EMRs. The ACA has provided extensive documentation regarding the benefits of increasing the use of EMRs instead of traditional, hand-written charts, to improve workflow. Although a digital chart is a useful tool for health care providers, it creates additional time spent with a computer versus time spent with a patient (Street et al., 2014). Patients have complained that health care providers are communicating more with their EMR computers than with the patients, which results in a decrease in patient satisfaction (Street et al., 2014). To ensure effective communication with patients, health care providers must maintain the conversation flow and avoid long periods of silence (Street et al., 2014).

The public policies that affect the health of the labor market are also particularly significant, as having a system of healthy workers would benefit any economy by offering a productive labor force that can contribute to the community (Adler & Newman, 2002). Government regulation of workers' occupational conditions is also determined by public health policies. Improvements in a worker's overall health can

improve their work output and lead to increased profits, improved productivity, reduced absenteeism, and overall reductions in medical costs (Adler & Newman, 2015).

Private financing of health care costs has also been altered due to the implications of the ACA. Patient satisfaction is influenced by the ACA's private and public sector funding, and the impact of private finance on publicly funded health care systems depends on the structure of both payers. The private share of health spending substitutes in part for public finance and serves as a mix of factors that have as much to do with sectoral shifts as they do with specific public policy decisions (Touhy et al., 2004). For instance, patient satisfaction in health care has now become a top priority for CMS; once the proper resources and efforts are directed toward patient satisfaction, HCAHPS scores should increase, allowing medical facilities to capture much-needed revenue (Kennedy et al., 2014). The three factors that have influenced patient satisfaction scores are low mortality rates, surgical volume, and hospital size (Kennedy et al., 2014). Favorable surgical outcomes may influence patient satisfaction as well, causing a rise in HCAHPS scores for medical centers that showed favorable surgical outcomes (Kennedy et al., 2014).

Osborn and Anderson (2015) explained that the public policies affecting United States health care legislation were implemented over the next decade, increasing the availability of health insurance, improving the quality and efficiency of health care, increasing preventative care and community resources, establishing state-based insurance marketplaces, eliminating co-payments for preventative services and immunizations, expanding federal funding for low-income and uninsured individuals, and increasing



overall insurance premiums for members. Extant research on how public policies affect health care satisfaction remains limited, suggesting the need for a better understanding of patient satisfaction (Weibe et al., 2014). It is also necessary to address the fact that Americans tend to react strongly to medical information, in part due to fear projected by the American media. American patients tend to be quite suspicious of the possible outcome of any medical examination (Marsh et al., 2013). The stress of waiting for results is enough to cause uneasiness for some patients, even before considering the cost of the actual medical exam or its results. When a medical problem is discovered, American patients tend to seek the best medical care possible in order to fight and recover from disease, often seeking as much surgery or treatment as possible (Kamimura et al., 2014). Due to this cultural perception, Americans are unlikely to accept less than the most advanced medical care and treatments.

The ACA established a shared responsibility between patients, employers, and physicians, with the aim of guaranteeing that all Americans have access to quality, affordable health insurance (Koh & Sebelius, 2010). However, health insurance coverage remains disjointed, with multiple private and public sources filling gaps in health coverage. The ACA contains some provisions specifically aimed at decreasing disparities for low-income residents, mental health care patients, substance abuse services, and community health centers (Koh & Sebelius, 2010). The ACA also provides numerous public policy initiatives at the local, state, and federal levels to address private initiatives and shift the focus from a specialist-focused system to a primary care-focused system (Carman et al., 2015). These policies aim to improve public health care services

to better satisfy patients by aligning targeted, accessible, continuous, coordinated, and family-centered care from both physicians and health care facilities in the United States.

The ACA has provisions that specifically promote patient satisfaction by creating ACOs, which are networks of medical centers, clinics, and physician offices that agree to share the responsibility for providing health care for a particular population (Koh & Sebelius, 2010). This shared responsibility is a cost-saving measure intended to reduce the difference between forecasted health care spending and actual health care spending for a specified population. Koh and Sebelius (2010) reported that implementation of ACOs throughout the United States was intended to integrate primary care services, behavioral health programs, social services, clinical health programs, and cross-sectoral shared savings models. Koh and Sebelius (2010) predicted that patients would continue to be satisfied with the changes in health care regarding the implementation of ACOs. Koh and Sebelius (2010) explained that patient satisfaction was projected to increase due to new pay-for-performance strategies and new bundled payments for patients. Under the ACO's bundled payment strategy, a single patient payment is made for medical services from some health providers related to a single episode of care. ACOs are not only integrating medical services; they are also establishing initiatives as a primary goal to satisfy policymakers (Koh & Sebelius, 2010).

The ACA also dictates increased staffing levels at medical facilities to assist with providing better nursing ratios and faster response times. Lasater, Sloane, and Aiken (2015) studied cross-sectional American Hospital Association data from 427 hospitals to determine whether increasing the number of registered nurses in hospitals contributed to

increased patient satisfaction. The cross-sectional data suggested that increasing nursing staff ratios resulted in higher levels of patient satisfaction, which ultimately raised hospitals' HCAHPS scores (Lasater et al., 2015). Additional research would need to be conducted to determine whether increased staffing does increase patient satisfaction scores for other ancillary health care professionals outside of nursing departments.

Satisfaction for patients is as a top priority under the ACA, which has shifted the primary legislation focus to patient feedback. Tajeu et al. (2015) researched patient satisfaction from medical centers and hospitals to determine which patients are most satisfied with their health care. Of the 92 participants in the study, every one of the patients experienced a problem that caused them to lower their satisfaction score. The most common complaints patients reported were wait times, billing issues, and the attitudes of staff members (Tajeu et al., 2015). Tajeu et al. (2015) suggested that some of the attitudes and behaviors of health care staff in a medical setting could contribute to patients' overall perception of satisfaction as well. Additional medical research needs to be gathered to determine whether future interventions should take place to ease employee burnout in a health care setting and focus on cultural competence and customer service skills for health care professionals.

The connection between patient satisfaction and surgical care is still unclear in most U.S. hospitals (Tsai, Orav, & Jha, 2015). However, concerns have been raised regarding a negative correlation between staff performance on patient satisfaction surveys and the quality of surgical care. Negative patient satisfaction can lead to potential trade-offs in overall efforts to improve patient satisfaction with other surgical quality measures

(Tsai et al., 2015). Since federal policymakers have established patient satisfaction as a core measure for the way medical centers are evaluated and reimbursed through the ACA, health care organizations are implementing numerous new methods to increase patient satisfaction scores (Tsai et al., 2015). Tsai et al. (2015) reported that medical centers with the highest customer service scores in the United States were the facilities with the shortest length of stay for patients, lowest hospital readmission rates, and lowest mortality rates.

Despite cogent arguments, the case for arbitrary rationing of medical care has gained little attraction in the United States (Kennedy et al., 2014). Americans have a growing need for research in this area, as health care is an important topic that all citizens are concerned with, whether their health insurance is issued by the government or by the private sector or both. Substantive research has addressed public health care policies in the United States, suggesting that there is a need for increased understanding of positive patient satisfaction in the field of health care (Kennedy et al., 2014). Now that a patient's level of satisfaction is directly related to the CMS's reimbursement of medical procedures, this topic needs to be explored more in detail. As of yet, little is known about the relationship between care coordination—directly assessed in terms of patient satisfaction from the patient's perspective—and dealing with health plans, providers, and future research (Wang, Mosen, Shuster, & Bellows, 2015). If a connection was determined that patient satisfaction was higher with the public policies established through the ACA, then perhaps certain aspects of this type of public legislation would be

utilized in other countries to promote positive social change and better health and satisfaction for its patients.

### **Public Health Policies of Canada**

The public health care system in Canada is structured differently than the health care system of the United States, although it operates under the same name: Medicare. Canada's health care system was enacted by the CHA and is designed to serve all residents of each province and territory of Canada. Kliff (2012) explained that approximately 70% percent of Canadian health care is publicly funded; the other 30% percent is privately funded through insurance premiums. The CHA, which was passed in 1984, combined two existing public policies: the Medical Care Act of 1966 and the Hospital Insurance and Diagnostic Services Act of 1957 (D. Cohen et al., 2014). The CHA solidified the five founding principles of Canadian health care: public administration, universality, accessibility, comprehensiveness, and portability. Medicare's policy administration operates on the public authority of a nonprofit insurance concept; universality is guaranteed in the sense that all Canadian residents have the same terms and conditions of health care. This includes accessibility, which permits residents to have the same access to services; comprehensiveness, which ensures that all residents are covered for what has been deemed medically necessary; and portability, which allows Canadian residents to be covered while they travel to any province or territory in Canada (Kliff, 2012).

The Canadian government, at the level of provinces and territories, has the primary responsibility for organizing and delivering health services while supervising

health care providers. Numerous provinces and territories have established regional health policies that deliver publicly funded health services locally (Allin & Rudoler, 2014). The Canadian federal government co-finances statewide programs to adhere to the underlying principles of the CHA, which sets the standards for all hospital, diagnostic, and physician services. Allin and Rudoler (2014) explained that all Canadian health insurance plans must be publicly administered, comprehensive in coverage, universal for all residents, portable across all provinces, and accessible with no user fees. The Canadian federal government also regulates the safety and efficacy of all medical devices, natural health products, pharmaceuticals, research studies, and public health functions.

The public policies that influence Canada's health care system are implemented and administered by the decision-makers of the Canadian public administration. Husereau et al. (2014) has reported that the Canadian health system employs an evidence-based decision-making process to develop their economic evaluations for establishing public policies. Despres, Almeras, and Gauvin (2014) have suggested that the Canadian workforce and labor market influence overall care of patients. Creating policy initiatives to improve the health and wellness of health care workers has been a primary focus of the CHA. However, the effectiveness of the health care delivery system and its overall impact on Canadian health works has yet to be determined (Despres et al., 2014); therefore, additional research exploring the comprehensive impact of the CHA on health care workers should be conducted.

In Canada, all health care public policy is influenced by the CHA and the government. Raphael (2015) contended that, even though evidence showed that public policy is equitably distributed by social determinants, achieving such a public policy has been uncommon. The Canadian government has incorporated empirical evidence from public involvement to influence public policy, which has led to the enhancement of the entire Canadian health care system (Conklin, Morris, & Nolte, 2015). Conklin et al. (2015) noted that in order to develop public policy in Canada, the government raised awareness about public health legislation in order to enhance the entire health care system. Despite the amount of work addressing the public's involvement with health care policy and the CHA, there is not yet sufficient evidence to assess its overall impact in terms of patient satisfaction. Raphael (2015) suggested that this was attributed to Canada's administration focusing primarily on patient risks and outcomes rather than overall patient satisfaction.

Public health care policies in Canada are similar to those in the United States in the sense that both countries use economic evaluations and political ideology to determine medical decisions (Husereau et al., 2014). Canadians understand that having access to quality health care is essential to improving the health of citizens (Campbell, Klei, Hodges, Fisman, & Kitto 2012). Canada has provided health care to residents and visitors without an initial cost because it was mostly financed through taxes paid by Canadian citizens. Canada has a celebrated history in the development of outstanding public health, as evidenced by the 1974 Lalonde Report (D. Cohen et al., 2014). The Lalonde Report was a report produced in Canada that proposed the concept of the health

field, identifying two main health-related objectives: the health care system and prevention of health problems and promotion of good health. The primary focus of the CHA is to provide good health for all Canadian citizens and to ensure that public health policies are established to improve the health of the population while reducing health care disparities (Campbell et al., 2012).

The Canadian health care system focuses on several goals for the well-being of citizens and operates with a correspondingly diverse way of understanding those aims (Bhatia & Orsini, 2014). Canada's government does not ask for feedback regarding a patient's level of satisfaction post-treatment, as it is not required through the CHA. Bhatia and Orsini (2014) explained that policymakers focus on the costs associated with each patient, primarily preventative care, when establishing public health policies. Patient satisfaction was simply not part of the feedback evaluation process; therefore, it was not taken into consideration when establishing Canadian health public policies.

As well as the government, the Canadian media also has a strong influence on public health policies and insurance coverage. Rachul and Caulfield (2015) contended that the Canadian media frequently discusses important CHA issues pertaining to access to health care, the wait time associated with health care, the technology used in health care, the funding for health care, and physician shortages. The Canadian media has also exposed some of the pitfalls of Canadian health care regarding its accessibility. Rachul and Caulfield (2015) examined numerous zip codes in Canadian territories and discovered that each zip code has unique issues in terms of health coverage, therapies, and technology, according to the CHA. Some territories were able to demonstrate



compliance for meeting the needs of the economic challenges with efficient technology, and some did not. Canadian residents refer to this distribution of inequality as the “postal code lottery” (Rachul & Caulfield, 2015). It is therefore necessary to conduct additional research into how satisfied Canadian residents are with medical treatment in less-serviced areas; further, this should be addressed in connection with the overall status of Canada’s health care system.

The Canadian media reports consistently on the CHA and public health, which shapes the public’s perception of health-related issues and concerns. Rachul and Caulfield (2015) described the three primary aspects of news coverage about Canadian public health policy: 20% described the government’s responsibility to improve access to health care, 14% detailed difficult access to health care, and 10% described the inequality of the health care system. Rachul and Caulfield (2015) suggested that, overall, the Canadian media is sympathetic towards patients and primarily promotes discussions about public health policies concerning medications, private funding, and improving access, procedures, and other medical treatments. Based on previous research that has demonstrated the overall impact of the Canadian media over the past decade, questions about the impact of news coverage on past and future health policy should also be addressed (Rachul & Caulfield, 2015). Additional research should be conducted to determine whether promoting health care public policies through the Canadian media has a positive effect on the people who experience care and treatment or whether it was just exposing the challenges involving the CHA and health policy decisions.

Canadian health policies regarding physician recruitment, retention, and expenditures are discussed frequently within the Canadian government. Di Matteo (2014) addressed Canadian physicians' impact on various levels of patient satisfaction in relation to the number of patients they see annually. From 1975 to 2009, Canada increased its number of physicians by 13% to address the increase of population, alongside approval for an increase in provincial government health spending in accordance with the CHA (Di Matteo, 2014). Patient volumes continue to grow annually in Canada; adding new physicians and attempting to better align the CHA with patients serves as an attempt to satisfy more patients.

Canadian patients receive the majority of their public health updates from the Canadian media, journalists, and academic experts. Canada's journalists and academic health policy experts' work together to ensure the quality and quantity of health policy coverage in the Canadian media (O'Grady et al., 2015). The CHA medical advisory board focuses on the constraints and objectives Canadian medical patients' experience to provide an evidence-based perspective on patient satisfaction. O'Grady et al. (2015) expressed that Canadian journalists project numerous learning objectives through broadcast media—in forms including videos, podcasts, webinars, and infographics—to explain specific health policy issues. O'Grady et al. (2015) determined that Canadian residents remain informed regarding public health policies, which has proven to be very important to Canadians wanting to stay current on public health policies. The CHA established a democratic system for the media to air and discuss Canadian public health policy in the news using evidence-based discussions.

Canada has used the public's involvement in creating and maintaining health care policy for many years. Conklin et al. (2015) reported that Canadian citizens were satisfied that their involvement served to enhance the responsiveness of their health system. The CHA explained that the Canadian public was involved with voting on current health care policies and was therefore active in public policy development for health care-related issues (Conklin et al., 2015). Conceptualizing the use of the public's involvement in health policy decision-making remains an important issue to those establishing new health public policies.

Canadian health policy dictates that the CHA operate as a publicly financed system; however, two-thirds of Canadian residents take out private, supplemental insurance policies to cover any additional medical expenses (Kliff, 2012). Canada spends approximately 12% of its gross domestic product annually on health care services (compared to 18% in the United States) and pays its physicians a flat, fee-for-service rate, as negotiated by the Canadian government (Husereau et al., 2014). The average physician in Canada makes around \$125,000 per year, whereas the average physician in the United States makes around \$186,000 per year (Kliff, 2012). Patients in Canada wait an average of 31 days for a medical appointment, whereas patients in the United States wait an average of 2 to 3 days for a medical appointment (Kliff, 2012). While both the United States and Canada focus on providing immunizations and prescription drugs to their citizens, the costs associated with these are different (Husereau et al., 2014).

The CHA dictates that health and wellness programs must be integrated into Canadian culture to promote the well-being of Canadian citizens. Public policy programs

such as this are satisfying for both citizens and medical patients, as they facilitate health and support. Despres et al. (2014) reported that Canada experienced an overall reduction in mortality rates related to various cardiovascular diseases. This was directly attributed to mainstream health prevention techniques and promotional interventions related to reducing risk factors for cardiovascular disease (Despres et al., 2014). The CHA obtains the opinions of Canadian citizens through their labor and marketplace initiatives and disperses the results through community wellness programs in Canadian workplaces. Despres et al. (2014) noted that numerous public health policy initiatives were created to improve health and satisfaction in Canadian workplaces; however, additional research should be conducted to determine how satisfied employees are with the effectiveness and delivery of these health wellness programs.

The Canadian concept of public involvement to assist in the decision-making process of establishing health policies has developed over decades. Li, Abelson, Giacomini, and Contandriopoulos (2015) reviewed previous research on how the public's involvement has influenced health care public policy and the internal dynamics of social change. Canadian public health policies are impacted by citizens' contributions to the interpretation and operationalization of public health laws and how they connect facilities, physicians, and patients (Li et al., 2015). The results are gathered and mediated by the CHA data received by patients from their public involvement with health care-related treatments. Such findings are significant in terms of improving conceptual clarity about how Canadian patients perceive their overall health care and how their involvement determines the decision-making process for new public policy (Li et al., 2015).

While patient involvement at the clinical level in Canada has received considerable attention from researchers, patient satisfaction has not yet been effectively measured (Boivin et al., 2014). To best evaluate patient satisfaction, the CHA requires both patients and physicians to be involved in the collective decision-making process concerning the development and improvement of health care public policy. An overall evaluation measure guiding the development and implementation of effective Canadian public involvement is lacking (Boivin et al., 2014). One of the most difficult challenges regarding credibility and legitimacy is gathering CHA data from medical patient services. Patient credibility should be supported by personal experiences to help compile data for public policy involvement (Boivin et al., 2014). By paying greater attention to medical patient data, patient-centered medicines, and shared decision-making, Canadian policymakers could develop and implement more effective public policy involvement for medical interventions.

The Canadian health system dictates that patient safety must be a high priority. However, a growing body of evidence supports the suggestion that the health of medical professionals and patient safety are positively correlated (Jones, Stockwell, & Lake, 2015). The health of medical workers and the safety of medical patients have both been affected by Canadian health care policies in terms of multiple safety measures that protect both groups. The CHA has implemented numerous public policies that govern the health and safety of Canadian patients and occupational health care workers (Jones et al., 2015). The safety measures implemented a multitude of safety elements and underlying mechanisms that help to keep health care workers and patients safe.

Understanding the key CHA policy issues that keep health care patients and workers safe is extremely important to designing safe hospital systems for both health care professionals and the medical patients they treat (Jones et al., 2015).

### **Patient Satisfaction**

Canadian public health policy does not specify how patient satisfaction is conceptualized and measured through the CHA. To address this issue, Boquiren, Hack, Beaver, and Williamson (2015) suggested using a patient questionnaire to assist with gathering data on patient satisfaction levels after receiving medical care. This questionnaire would focus attention on having patient's rate service on their overall level of care, their health care team, and the physician who provided the medical care (Boquiren et al., 2015). Further research into the possible implementation of a post-treatment health care survey to better determine satisfaction levels among Canadian medical patients is necessary.

The CHA includes provisions that address Canadian public health units and focus on a patient's social determinants of health, with a specific focus on positive health promotion for its citizens. The CHA requires the reporting of health inequities through the Canadian Public Health Standards Committee using various provincial public health documents (Brassolotto et al., 2013). Positive health promotions through the CHA endeavor to address the needs of patients, understand their concerns, and validate patient outcomes (Brassolotto et al., 2013). Canadian patient data is reviewed by the Canadian Public Health Standards Committee, and concerns are addressed using the gathered research. Brassolotto et al. (2013) noted that, even though patient satisfaction data is

collected and analyzed, there is still a substantial barrier for the internalization of the discourses and research gathered in the Canadian health care system.

The Canadian health system uses multiple decision-making factors when designing and enacting new public health policies that affect Canadian medical patients. If decision-makers are invested in research, this increases the possibility that patients are asked timely and relevant practice-based research questions and that the data collected is utilized in creating public health policy (Traynor, Dobbins, & DeCorby, 2015). Many challenges arise from collecting this type of research data from patients: staff workloads to handle the data collection, unpredictable practice settings of the surveyed population, the overall knowledge of patients, and changes in patient priorities (Traynor et al., 2015).

The CHA promotes community-based participatory research programs to promote public health policy and investigate locality-based research strategies in different ethnic neighborhoods. These programs offer numerous benefits in terms of developing public health policy and make substantial contributions to policymaking for health equity in Canada (Cacari-Stone et al., 2014). Civic engagement is critical to the role of community-based research, as it provides an in-depth look at communities that are burdened by health inequities and lackluster policy making. The community-based participatory research program illustrates connections among patients, physicians, and staff members; between policymaking processes and strategies; and between outcomes and results (Cacari-Stone et al., 2014). Canadian health strategists should focus more attention on community research strategies for more effective development of new public health policies.

Canadian health public policy also addresses the overall utilization and satisfaction of medical patients who receive mental health services. A provincial Canadian health plan includes the patient's diagnosis and reimbursements to physicians without co-payments or deductibles for the patient. Canadian patients reported satisfaction and noted that, without having to pay a fee for medical services, they were more likely to visit a medical center; some patients reported logging twenty visits annually (Steele, Glazier, & Lin, 2006). Steele et al. (2006) suggested that, even though there are no medical bills charged to individuals who utilize Canadian medical services, geographic disparities limited the frequency of visits depending on how far a patient was from a medical center. Therefore, the CHA should also factor into their statistical data the distance some patients must travel to locations where they can access medical services.

Public health policies in Canada are designed to improve the overall health of Canadian citizens and are especially focused on collaborating with public health professionals, researchers, policymakers, and other medical experts. The CHA focuses on sharing information with the public on health policy, improving the practice of integrating health equity considerations, and sustaining collaborative work in developing and modeling public health (Moghadas, Haworth-Brockman, Isfeld-Kiely, & Kettner, 2015). For example, the CHA has specific parameters for reducing infectious transmissions and preventing the spread of disease; this issue was addressed due to a previous gap in statistical data pertaining to the spread of infectious diseases in Canada (Moghadas et al., 2015). The CHA described the mathematical model used as the



framework that represents some aspects of reality at a sufficient level of detail to inform a clinical or policy question. Moghadas et al. (2015) detailed the computational and statistical data techniques and models that have been utilized in the Canadian public health system; however, it remains unclear to what degree patient satisfaction outcomes have been used to shape public health policy.

The CHA does not collect statistical patient satisfaction data of all patients receiving medical treatments in Canada; however, they do collect and record the satisfaction of health care patients who have contracted HIV. The Canadian health system records voluntarily provide public health data on sexual activity and patient satisfaction among women living with HIV in Canada (Kaida et al., 2015). This type of data includes records of patients' quality of life, clinical health data, and risk of transmission. Public health policymakers are now suggesting that sociodemographic data—such as age, gender identity, sexual orientation, education, ethnicity, annual income, relationship status, and number of children—should be collected along with medical data (Kaida et al., 2015). Data collected and reported by the Canadian health system indicate that there is still a need for public health and socio-structural interventions to support the overall health and satisfaction of Canadian citizens.

While the Canadian health system has a well-established tradition of accountability and transparency for their health care system, only a few measures of patient satisfaction outcomes have been recorded. Patient results and outcomes are measured to enable better understanding of how effectively a health care system achieves its goals, supports effective decision-making, and better matches the delivery of health

and social services to the evolving needs of patients (Veillard et al., 2016). Measuring patient outcomes helps policymakers understand how public policy interventions can contribute to achieving targeted outcomes and their role in the broader social determinants of health. Veillard et al. (2016) explained that, by publicizing patient outcomes, these measures could empower patients, families, and communities to engage in debates regarding public policy and how health care should be delivered. However, medical organizations that report health information publicly tend to only collect outcome measures, rather than statistics on patient satisfaction (Veillard et al., 2016). This indicates a gap in the research data pertaining specifically to patient satisfaction levels and outcomes.

The CHA does not specify that the satisfaction of medical patients should be gathered and documented in post-medical care surveys. However, patient satisfaction is influenced by numerous factors and should be recorded for process improvement purposes. Dodek et al. (2012) described that positive organizational culture and patient safety are vital to medical patients in terms of feeling satisfied with their health care at medical facilities. Research has shown that strong positive relationships between well-organized medical care and patient safety, combined with allowing patients' families to be a part of the decision-making process, produced high satisfaction levels of both medical patients and family members (Dodek et al., 2012). While medical patients tend to provide feedback when asked, so few Canadian patients are asked for input that such data remains limited. Since results have shown that patients would be willing to participate in providing feedback, more effort should be made to capture this data and

publish the results for public policy decision-makers to see. Dodek et al. (2012) has suggested gathering post-care data from patients through a survey in a timely matter to best capture patient satisfaction and improve overall medical care at Canadian medical facilities.

Satisfaction associated with medical care has been identified as an integral component of quality assurance by multiple health care organizations. Hannon et al. (2013) has addressed the fact that patient satisfaction was first identified by the World Health Organization as a necessary part of the healing process. The World Health Organization defined patient satisfaction as the fulfillment of an individual's needs and expectations of those receiving medical care. Patient satisfaction was important for quality assurance between patients and caregivers, providing much-needed feedback for health personnel. Hannon et al. (2013) stated that hospitals and medical centers should collect patient satisfaction data regarding patients' care in order to effectively articulate their perspectives and preferences. Patient satisfaction should include measuring the accessibility, coordination, and personalization of a patient's medical care along with symptom management, communication, emotional support, and decision-making (Hannon et al., 2013). Direct evaluation of patient satisfaction scores would provide and identify the unmet needs of the patient and uncover the gaps in medical patient care to be incorporated into the CHA.

### **Influence of Public Policy Changes like the Canada Health Act**

Patients in Canada under the CHA, should be encouraged to consider patients and their caregivers as a unit of care and provide support for both patients and their families

(Hannon et al., 2013). Only a limited number of medical studies have documented patient satisfaction in a post-caregiver setting, suggesting the need to document and collect this type of data to best drive health care public policy. Hannon et al. (2013) noted that no Canadian research study had directly compared patient and caregiver reports regarding satisfaction with post-medical care. Canadian public health policymakers need this type of information to best create and establish new legislation and laws regarding the proper treatment of patients.

Several different performance measures should be established and implemented to best address feedback from Canadian patients. Jeffs et al. (2013) suggested that the CHA assemble a structured panel of health care professionals to define the quality metrics needed to measure and record patient satisfaction among Canadian patients. Jeffs et al. (2013) recommended that the performance indicators for medical patients should reflect the overall quality of care in relation to the patient's treatment and any other pertinent feedback that would assist in developing better outcomes for patients. Jeffs et al. (2013) suggested readmission rates, medication reconciliation, length of stay, and post-discharge evaluation as the primary research topics that should be used to measure patient satisfaction. Additional research efforts should be undertaken to explore the feasibility and applicability of using performance measures to increase the quality of Canada's health care system.

Canada is shifting to a more balanced decision-making process by gathering patient outcomes in order to establish a health care public policy that included feedback from physicians, clinicians, and patients. Veillard et al. (2016) explained that the

measurement of health outcomes from a patient's perspective has great potential to improve the overall quality of care and advance Canada's health care goals. Outcome metrics are used in terms of measuring patient satisfaction to better understand how effectively the Canadian health care system achieves its goals; further, outcome metrics support better decision-making by matching the delivery of health and social services to the changing needs of patients (Veillard et al., 2016). Gathering patient satisfaction scores regarding health care outcomes can contribute to achieving targeted goals and broadening social determinants of health. The CHA needs to incorporate a democratic perspective to publicize their medical patient outcomes throughout Canada. Veillard et al. (2016) acknowledged that publicizing patient satisfaction outcomes would empower families, patients, and communities to engage in a public policy debate regarding which outcomes matter the most and how health care is delivered. The next challenge for Canadian public policy decision-makers would be addressing how to implement the changes discussed by clinicians and patients.

The CHA does not specify how to analyze and apply gathered data on post-medical care patient satisfaction reports. Veillard et al. (2016) suggested that the clinical data be aggregated, analyzed, and risk-adjusted to determine how public health policy and other interventions could entice professionals to focus on improving their outcomes and enabling patients to receive better medical treatments and services. Veillard et al. (2016) determined that the CHA focuses primarily on recording data inputs, resource utilization, and access to care and that, while these indicators are important, they do not provide a total overview of how the Canadian health care system is performing in relation

to its primary goals. Secondary clinical data is collected and analyzed in Canada by the Canadian Institute for Health Information; however, there are numerous gaps in patient experience regarding satisfaction, which delay patients from receiving care (Veillard et al., 2016). From a public policy perspective, outcome measures assist in the delivery of health care services and the evolving needs of patient populations; therefore, a means of gathering this information would be beneficial to the overall health care system in Canada.

Canada has recently implemented the Canadian Community Health Survey, which is a cross-sectional survey tool for gathering health-related data from medical patients regarding their recent health care experience. Veillard et al. (2016) explained that the Canadian Community Health Survey would incorporate validated measurement tools into the Canadian health care system to capture the satisfaction levels of patients on national, provincial, and regional levels throughout Canada. Every five years, Canadian legislators evaluate the gathered Canadian Community Health Survey data and discuss the results among public policymakers, system managers, clinicians, researchers, and patients to make informed medical decisions, manage costs more effectively, and provide better medical care (Veillard et al., 2016). This helps to eliminate the gap in Canada's patient satisfaction data, since Canada essentially does not track the care trajectories and outcomes of patients once they are discharged.

Canada is slowly moving towards a more robust EHR data collection system that allows public policymakers to better gather and analyze medical data from patients. Protti (2015) acknowledged that the use of health care performance indicators would

influence public policymakers on how to improve patient outcomes while enabling knowledge sharing regarding the effectiveness of multiple policies, procedures, and strategies. Effectively employing patient survey data not only requires an adequate analysis of patient data but also the integration of satisfaction, financing, and accountability of the Canadian health care system (Protti, 2015). The implementation of Canada's EHR was intended to alleviate some of the technical problems regarding Canada's medical record keeping. However, the efforts of the Canadian federal government to upgrade their informational EHR systems fell short, causing Canada to be one of the least surveyed countries in the world (Protti, 2015). Canada has yet to take full advantage of EHR technology for improving patient outcomes, medical records, communication, and access to information.

The CHA has united public health policy with medical care to establish a health care system in Canada that has helped to provide continuous change and quality improvement in an integrated health care system. Canadian decision-makers and policy creators need to stay focused on improving patient outcomes by setting realistic goals for improved quality and holding institutions accountable for successfully achieving these goals. Veillard et al. (2016) suggested that the Canadian federal government should focus on integrating care around patients' needs for health equity, gathering health data from various patient populations, designing proper incentives that align health promotions and disease prevention, supporting action on social determinants of health, and better engaging and empowering both patients and society. Quality performance

metrics established by multiple public health sectors gave policymakers and the public a chance to improve the Canadian health care system overall.

### **Summary**

This chapter included a review of published scholarly literature and the need for continued research to examine the public policies that influence and determine patient satisfaction. Research on public policies in the United States has primarily addressed the ACA and its guidelines and goals. The ACA provides details of health care coverage and socioeconomic disparities of patients throughout the nation. The literature reviewed addressed private health care financing and the statistical data needed to reflect current health market trends. The ACA and HCAHPS literature listed specific guidelines explaining patient satisfaction benchmarks and the financial responsibility of patients, as well as average patient wait times for scheduling medical procedures and obtaining medical exam results.

Chapter 2 also included a discussion of the CHA's goals and guidelines. The CHA provides details about Canadian taxes and funding for health care, political ideology, economic evaluations, and health care coverage for patients throughout Canada. The literature reviewed has addressed public government financing and private health care financing options, along with the statistical data needed to reflect current health market trends. The CHA detailed how the Canadian government is both accountable and transparent to its residents regarding the accessibility and availability of health care services. The CHA and community-based participatory research program literature listed specific guidelines explaining the utilization of health care services and



patient health and wellness programs, while describing preventative medicine programs and Canada's focus on a patient's overall well-being.

Chapter 3 includes a discussion of the methodologies used to analyze and compare the public policies that influence patient satisfaction levels and how this applies to public health policy research.

## Chapter 3: Research Method

### **Introduction**

The public policies that impact health care in the United States and Canada may influence how patients rate their overall levels of satisfaction. One of the primary concerns in health care is the lack of government reimbursement for health care services provided based on patients' overall levels of satisfaction. As the problem under investigation is related to the characteristics of public health policies, a nonexperimental, quantitative, comparative approach was used to examine the ACA's and CHA's respective impacts on patient satisfaction. By analyzing data collected from patients surveyed in both the United States and Canada, it may be possible to draw conclusions on how these public health policies can predict a patient's perception of satisfaction.

### **Research Design and Approach**

The purpose of this quantitative, comparative, correlational study was to examine the extent to which federal reimbursement is impacted by patient satisfaction scores, specifically regarding the two primary public health policies that affect residents of the United States and Canada. As this study involved the analysis of patient data, it was appropriate to use a nonexperimental, quantitative approach. The purpose of using a nonexperimental research design is to describe achievements, interactions, attitudes, and relationships. Further, quantitative research is focused on designing and executing research that involves issues such as plan sampling, designing measurement instruments, choosing statistical tests, and interpreting results that are integrated into the research

process (Black, 1999). Quantitative data are often collected for statistical analyses or experiments and is primarily represented using graphs, charts, and tables.

I considered both systematic review and qualitative analysis as alternative research methods for this study. However, I deemed both inappropriate because they were not cost-effective and would consume too much time as a primary source of research data. Therefore, I used post-care survey data to record levels of satisfaction among medical patients. Survey data are useful in scholarly research because it facilitates a focus on specific measurement designs that prevent the manipulation of an IV, random assignments, or participants to conditions or orders (Black, 1999).

To further support the design and approach for this study, this study was guided by the theory of choice and grounded in literature focused on the health care industry with an understanding of the public health policies that have impacted patient satisfaction levels. Most decision theory approaches are best associated with identifying the values of human behavior (Lehmann, 1950), which is what determines a patient's overall levels of satisfaction. The framework for this study also incorporated a deterministic approach, focusing on collected patient survey data from a specified subject population of the eastern United States and eastern Canada (Eastern Standard Time Zone).

### **Role of the Researcher**

The role of the researcher in this study was to survey patients living in the eastern United States and eastern Canada (Eastern Standard Time Zone), aged 55 to 75, who have received health care services within the last 2 years at either a hospital or medical center. I gathered responses from patients using an online survey instrument and

analyzed and validated the collected data. I reported the findings and drew conclusions based on the results of the collected data and focused the data collection and analysis on answering the following questions and hypotheses:

RQ1: How well do the healthcare reimbursement policies of the United States and Canada predict country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years?

$H_0$ : Healthcare reimbursement policies of the United States and Canada do not significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

$H_1$ : Healthcare reimbursement policies of the United States and Canada do significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

RQ2: How well does the financial responsibility of patients in the United States and Canada predict country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years?

$H_0$ : The financial responsibility of patients in the United States and Canada does not significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

$H_1$ : The financial responsibility of patients in the United States and Canada does significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

### **Methodology**

Subsequent research, along with decision theory, provided additional guidance for examining the public policies that impact patient satisfaction while allowing opportunities for new research and providing implications for future public policy decision-makers. I measured the indicators relevant to the hypotheses regarding patient satisfaction and identified these factors by collecting patient survey scores using a cross-sectional design methodology. This research methodology facilitated a comprehensive look at the impact caused by the ACA and the CHA in two separate countries with two different public health systems.

### **Sampling Procedures**

Sampling for this study consisted of assembling the population needed for gathering patient satisfaction survey data. The subject population came from the eastern United States and eastern Canada (Eastern Standard Time Zone). I used the results of the quantitative data to determine which public health system has the highest level of patient satisfaction, as sampled data must be analyzed to interpret a situation that involves several statistical components (cite). I used linear regression analysis to show the relationship between the health care systems and patient satisfaction.

I determined an a priori sample size using G\*Power (version 3.0.10) statistical software and calculated it using a point-biserial correlation as the test statistic. I determined the effect size average by calculating the correlation coefficient ( $r$ ) and using the coefficient of determination ( $R^2$ ) in all patient surveys that accounted for variance. I assumed that this effect size was extrapolated to fit this study, as surveying the entire country was not feasible. Using G\*Power computer software, I determined that the parameters and estimates for this research study would be adequate using a power level of .80, effect of .30, and alpha of .05. I determined an effective subject population size to be 75 subjects from each of the two countries; thus, I sent out 500 patient surveys (250 surveys to U.S. residents and 250 surveys to Canadian residents) to receive an assumed sample size of approximately 150 participants.

The intention of this sampling plan was to reduce sampling errors, bias, and any data collection, processing, analysis, or interpretation errors. Sampling bias was addressed with participating subjects that may have an active voice in the survey questions due to systematic selection. Statistical sampling methods allowed for selecting a small number of units that can provide valuable information related to the research questions under examination (Black, 1999). This study was composed of a data collection process, data analysis, and an interpretation of the results that reflected an adequate representation of the subject population.

### **Subject Population**

The subject population for this study included adults aged between 55 and 75 who had received health care treatment or services within the last 2 years from a hospital,

surgical center, or medical center and were living in either eastern Canada or the eastern United States. The population was gathered from the Eastern Standard Time Zone only. I chose these regions because the Eastern United States and Eastern Canada have multiple economic and social similarities regarding their geographic populations. The subject population for this study was consistent regarding the subjects' age, geographic location, and other patient demographics. The subject population samples were drawn from both urban and rural settings and adequately represented the subject population from these two similar national regions.

I advertised the specific criteria requested in senior-oriented magazines (such as *Readers Digest*, *AARP*, *Senior Living*, *Active Over 50*, and *Good Times Magazines*) to attract age-eligible survey participants, then administered my survey online through SurveyMonkey®. These patients participated in an online health care assessment survey that asked them to rate their level of satisfaction as a patient based on the same questions asked by HCAHPS and CAHPS, which are divisions of the CMS. The survey data included three primary constructs: age of the patient, geographic location of the patient, and the patient's recent health care experience. This allowed for a more comprehensive analysis of the data collected and a better representation of the subject population from both countries.

### **Data Collection**

I sent a link to the online survey instrument (SurveyMonkey®) to participants, which was accessed from any personal computer that has an internet connection. The online survey was a bipolar scaling method questionnaire using a five-level, Likert-like

scale that allowed patients to rate their level of satisfaction regarding certain aspects of their recent health care visit. Patients had five options to choose from—extremely satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, and extremely dissatisfied—as this survey did not allow for balanced keying.

This research strategy served as a fair representation of the sampled subject population, representing patients from both the eastern United States and eastern Canada. Quantitative research requires that the data collected be tested statistically for validity; further, the differences in the distribution of the sample counts was shown in the tables, and I determined whether the data were significant or just random chance. The collected quantitative research data refers to the statistics and figures that are collected during the research investigation or field of study and are used to determine the research findings.

The survey questions I was using to collect my research were designed and approved by HCAHPS and CAHPS. HCAHPS and CAHPS patient survey questions meet the standards set by the Agency for Healthcare Research and Quality and are published in the public domain, which makes them available for use without permission or cost. CMS requires that health care providers use approved surveys to officially participate in public programs such as HCAHPS and CAHPS. These surveys are the first national, standardized, publicly reported surveys of patients' perspectives of satisfaction in American hospitals. CMS has approved these online patient satisfaction surveys for collecting patient data, and HCAHPS and CAHPS are registered trademarks of the Agency for Healthcare Research and Quality, a division of the United States Department of Health and Human Services.



## Data Analysis

The survey consisted of a closed-ended iterative approach and included 10 questions. The first five questions were simple screening questions that must be answered with a “yes” to participate; the next five questions were primary research questions that determined the patient’s overall level of satisfaction. The first step was to analyze the data from the collection forms to generate an overall picture of the online surveys submitted. Responses gathered from the Likert-like survey questions was reported as continuous level data; I performed parametric tests for analysis. Since the data levels were continuous, I used linear regression for analysis and determined the relationship between the IVs and the DVs. Table 1 illustrates the research variables by category. This study’s IVs were scored using categorical data and DVs were scored using continuous levels of data with means attribute coding.

Table 1

### *Independent Variable Levels and Coding*

Independent variable	Data level	Attribute coding
Public policy	Categorical	
Affordable Care Act		1
Canada Health Act		2
Financial responsibility	Categorical	
United States		1
Canada		2

Teddlie and Tashakkori (2009) explained that quantitative data is very useful in scholarly research because it is capable of being measured and reported as numerical research findings. I analyzed and displayed linear regression results used for RQ1 and

RQ2 using graphs and tables to explain the results of the collected data. Wolfenden et al. (2016) explained that using a variance analysis, such as linear regression, to assess differences regarding public health policies works well for citing statistical results. I measured the results by odds ratio outputs and predicted scores on one variable from the scores on a second variable.

Performing linear regression assisted in anticipating the variable I am predicting, known as the criterion variable ( $Y$ ), and the variable that I am basing my predictions on, known as the predictor variable ( $X$ ). For RQ1, the IV was public policy, and the DV was patient satisfaction. For RQ2, the IV was who was financially responsible, and the DV was patient satisfaction. The overall analysis determined the validity of my hypotheses regarding patient satisfaction between patients in the United States and in Canada, and it tested for the likelihood that the IV predicts the DV. The collected survey data was entered into SPSS predictive analysis software to predict what happened with the research results and display any trends or normalities within the collected survey data. The strategy used for developing this research plan included action items for each step that I needed to undertake during the research process. I developed a strategy that accentuated significance and innovation about how much detail should be included in the experimental design.

Researchers use constructs as mental abstractions because constructs are rarely observational, which was the case when measuring patient satisfaction. Constructs can sometimes be difficult to fully understand and measure; therefore, the concept of clarity has become the foundation of quality research. I loaded all completed survey results into

an Excel spreadsheet with details of the data sampling, collection, and analysis processes. I evaluated the influence of outliers to determine the effect of their possible omission on the comprehensive results.

### **Rationale for Linear Regression Analysis**

In order to assess the impact of relationships between two IVs and an outcome variable, I used linear regression analysis as an important statistical tool to determine how public policy and financial responsibility impacted patient satisfaction. Sullivan and Artino (2013) explained that researchers create Likert-like survey scales when trying to measure things like patient satisfaction because trying to measure a single survey item would be unlikely to fully capture the concept being assessed. In this study, I used linear regression to test both research questions and their associated hypotheses by using continuous level data of the summed satisfaction scores. Linear regression expands on correlation by providing information on the impact that an IV has on the DV.

I reported the Likert-like survey questions as continuous level data, which allowed me to perform parametric tests for analysis. Parametric tests allow researchers to make predictions about the underlying population from which the research data has been obtained, while non-parametric tests are less powerful and generally require a larger sample size (Sullivan & Artino, 2013). Since the origin of my research was based on prediction and the correlation of the sum of scores, I assessed whether either country's health policy or financial classification predicts a significant change in  $R^2$  variance when regressed on self-reported patient satisfaction. I used the resulting  $R^2$  value to determine the magnitude of the variable accounted for in the regression model. Following Sullivan

and Artino's (2013) position regarding Likert scale data, I considered my participant-reported HCAHPS scores to be continuous level data for regression modeling.

### **Validity and Reliability**

I analyzed the gathered research data for validity, dependability, and reliability by measuring the extent to which variations in a certain phenomenon were tracked and explained. The validity of this quantitative research study was a fundamental part of the scientific method and a concern of research ethics. Without a valid design methodology, valid conclusions cannot be drawn about patient satisfaction. The validity process was undertaken using approved HCAHPS and survey instruments across various contexts; therefore, the best scenario to address both validity and bias was for me to assess the overall consistency of the research data in a variety of different health settings.

Gliem and Gliem (2003) explained that Cronbach's  $\alpha$  (alpha) reliability coefficient for Likert-like scales requires the administration of only a single test to provide an estimate of the reliability for a given test. The survey items are chosen to comply with the specifications that are drawn up through a thorough examination of the subject population. If the data collection procedures align with the survey questions, this should yield reliable, unbiased results while recording adequate research information that was trustworthy and valid.

The quantitative research data must be proven to be both valid and reliable for the research study to be successful. Cronbach's alpha reliability coefficient for Likert-like scales is commonly used to validate, calculate, and report alpha coefficient for internal reliability, which I employed for any scales or subscales I was using. Data reliability is

the process through which the research results are proven consistent over time and serve as an accurate representation of the total subject population. Data validity was rooted in a positivist tradition and was defined as a systematic theory of being valid. This research study was structured in a manner that allowed the quantitative data to be determined as valid by using a computer software program. Using a variety of settings increased the chances of providing reliable and valid data for the purposes of this research study.

The research methods used for this quantitative study must allow for the results to be tested statistically in order to validate the collected research data. Gliem and Gliem (2003) stated that Cronbach's alpha is a function of the number of items in a test, the average covariance between item pairs, and the variance of the total score. Statistical tests are used to reflect the differences in the distribution of the sample counts and determine if the results are significant or not. For the purposes of the present study, I chose a case-specific approach, as it provides a greater opportunity to understand the complexity of an individual's experience. I used computer software to calculate and analyze the collected research data, then performed a statistical analysis to determine any deviation between the variables. I used the research data to estimate or approximate the characteristics, attributes, and properties of a specific phenomenon. Using a variety of settings increased the chances of providing reliable and valid data in this research study, while promoting positive social change for patients seeking medical care.

### **Protection of Participants' Rights**

This research study was reviewed by a Walden University Research Reviewer and the Walden University Institutional Review Board (IRB) based on IRB approval #01-10-

19-0278723. I maintained data integrity by using password protected and encrypted email files of the archived dataset information; I will store this information on a password protected internal hard drive for five years, then completely delete the contents and then destroy it. I did not collect any hard copy data sets, as I only accepted and recorded online submissions through SurveyMonkey®. Participants for this research study were not compensated or rewarded with any incentive to take the online survey. Individuals who met the inclusion criteria were identified as having acknowledged consent by clicking on the survey link and taking the online patient survey (see Appendix B).

### **Summary**

This retrospective, quantitative, comparative, correlational study examined the extent to which patient satisfaction was impacted by the national public health policies of the United States and Canada. This chapter included a discussion of the context of the study, its research design and approach, setting and sample population, instrumentation and materials, participant selection process—including inclusion and exclusion criteria—the role of the primary researcher, the measures taken to protect study participants' rights, and the data collection and analysis process. Chapter 4 presents the results of this research.

## Chapter 4: Results

### **Introduction**

The purpose of this quantitative, comparative, correlational study was to examine the extent to which federal reimbursement is impacted by patient satisfaction scores based on two primary public health policies that affect residents of the United States and Canada. I performed linear regression to determine how well the IVs of public policy and financial responsibility explained the outcome or DV patient satisfaction. The overall analysis allowed me to examine the direct and individual effects of policy and financial responsibility on patient satisfaction between patients in the United States and in Canada.

Participants for this study were obtained through various networks, including advertising small banners in age-appropriate, senior-oriented magazines such as *Senior Living*, *Active Over 50*, and *Good Times Magazine* in both the eastern United States and eastern Canada. I also reached out to members of my professional and personal networks in both the United States and Canada and e-mailed them an invitation, consent form, and the online survey link to see if they would qualify to take the research survey as well. This allowed for a broader approach to allow eligible subject participants to take the survey in both the eastern United States and eastern Canada. This chapter details the information on the IRB-approved research instrument and provides descriptive and inferential analyses of the research findings.

### **Research Instrument**

Initial IRB approval to conduct this research was obtained on January 10, 2019. Shortly thereafter, eligible survey participants across the eastern United States and eastern Canada who met the participant criteria completed an online survey. The quantitative data were collected online for a period of 90 days through SurveyMonkey® from January 12, 2019 to April 12, 2019. The survey consisted of a closed-ended iterative approach and included 10 survey questions. The first series of questions included simple screening questions that required “yes” responses in order for the participants to qualify for the survey. The next five questions were primary research questions that determined the patient’s overall level of satisfaction with their recent medical procedure.

The first step was to analyze the survey data to answer the research questions. Responses gathered from the Likert-like survey questions were reported as continuous level data and were analyzed by parametric tests for analysis. Because these data levels were continuous, linear regression was used to determine whether a statistically significant relationship existed between the IVs and the DV. The order in which variables were entered in the linear regression equation was important. Therefore, a hierarchical linear regression method was utilized in order to enter predictor variables into the regression equation in predetermined steps defined by my research committee and was confirmed using logistic regression analysis.



## Descriptive Sample

From January 12, 2019 to April 12, 2019, over 200 survey participants utilized the survey link provided in the magazine banner advertisements. Figure 1 shows a banner advertisement included in *Good Times* magazine (February 2019 edition).

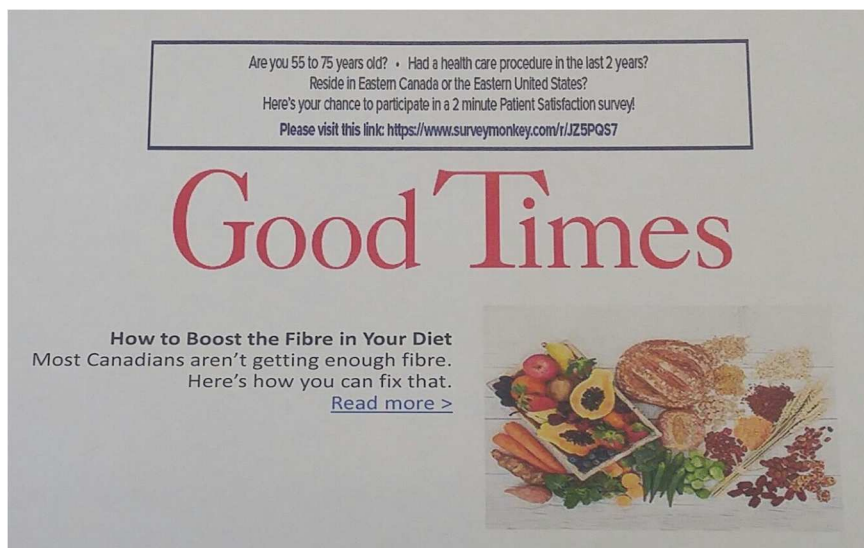


Figure 1. Survey magazine advertisement.

The survey closed on April 12, 2019, 90 days after the first survey results were recorded. A total of 195 participants fully completed the online survey and provided some form of useful data for analyses. A total of 29 participants submitted incomplete or erroneous answers in some of the variables or provided answers that did not meet eligibility criteria and were excluded from data analyses. The remaining 166 survey responses contained valid data for the demographic questions. A sample size of 166 exceeds the required minimum sample size of 150 necessary to achieve power of at least .80, using linear regression with an alpha of .05, an effect size of .30, and with two IVs.

In post hoc analysis using G\*Power 3.1, the achieved power given the same parameters was .80.

Analyses were conducted on eligibility factors such as age-specific requirements targeting adults aged 55 to 75, geographical location requirements focused on the Eastern Time Zones of both the United States and Canada, and a medical procedure being performed within the last 2 years. Participants who responded were primarily from the Eastern Time Zone of both the United States and Canada, with 29 responses who were outside of the Eastern Time Zone, not between the ages of 55–75, did not have a medical procedure in the last 2 years, or were statistical outliers. These respondents' data were removed from subsequent analysis and not included in this study.

### **Hypotheses Testing**

Linear regression requires a continuous DV, and linear regression with a dichotomous DV yields a linear probability model in which the predicted probability bears a simple linear relationship to the predictor (J. Cohen et al., 2003). Linear regression allows for the determination of the amount of variance in the DV ( $R^2$ ) that is accounted for by a model that contains multiple predictor variables. The major assumptions of linear regression are normality, linearity, homoscedasticity, and no multicollinearity, and it is sometimes implemented when a quantitative variable or DV is studied as a function of the IVs (J. Cohen et al., 2003). Two research questions and associated null and alternative hypotheses were addressed to examine whether the relationships among the independent and DVs existed as predicted:

RQ1: How well do the healthcare reimbursement policies of the United States and Canada predict country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years?

$H_0$ : Healthcare reimbursement policies of the United States and Canada do not significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

$H_1$ : Healthcare reimbursement policies of the United States and Canada do significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

RQ2: How well does the financial responsibility of patients in the United States and Canada predict country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years?

$H_0$ : The financial responsibility of patients in the United States and Canada does not significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

$H_1$ : The financial responsibility of patients in the United States and Canada does significantly predict the percent change of  $R^2$  variance in country-specific patient satisfaction scores for persons aged 55 to 75 who have undergone medical procedures in the past 2 years.

## **Analytical Approach**

### **Data Analysis: United States**

Analyzed public health policy survey data showed a mean of 4.27 on a scale that ranged from 1 to 5, suggesting that the participants overall had strong and favorable perceptions of the public health policies that impact patient satisfaction in the United States. Analyzed data also showed a mean of 4.22 on a scale that ranged from 1 to 5, suggesting that the participants had strong and favorable perceptions of the financial responsibility for the medical procedures they had undergone. Further, analyzed data showed a mean of 4.48 on a scale that ranged from 1 to 5, suggesting that the participants had strong and favorable perceptions overall for the medical procedures they had undergone. The range resulted in a distribution of responses, and the lowest score was 3 (neither satisfied nor dissatisfied), and the highest score was 5 (extremely satisfied).

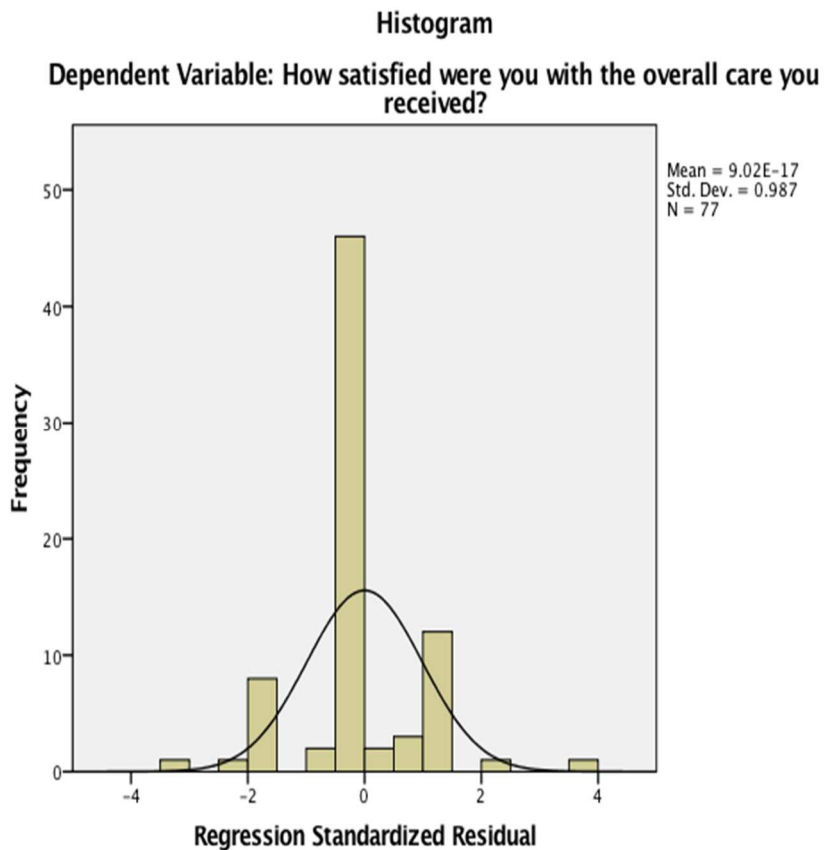
Skewness statistics were assessed to determine response data distribution. As shown in Table 2, the skewness statistics for the United States sample did not exceed  $\pm 2.00$ ; thus, data were acceptable for further analyses. Given the high scores in the context of this study meant more favorable perceptions, the negative skewness in this case indicated that the participants' perceptions of the public health policies that impact financial responsibility and patient satisfaction were favorable, supporting the assumption that residents of the United States are satisfied with the public health policies that impact their patient satisfaction and somewhat satisfied with the public health policies that impact their financial responsibility on their end.

Table 2

*Variable Statistics: U.S. Sample*

Variable	Minimum	Maximum	Mean	<i>SD</i>	Skewness	Kurtosis
Public policy	1.00	5.00	4.27	1.20	-1.64	1.33
Financial responsibility	2.00	5.00	4.22	0.81	-1.27	1.80
Patient satisfaction	3.00	5.00	4.48	0.55	-0.37	-1.00

**Test of assumptions: U.S. sample.** The data analyses were done separately for the United States and Canada. The following assumptions for multiple regression were tested and only slightly met: (a) normality of residuals (see histograms of residuals), (b) homoscedasticity (see scatterplots of standardized residuals and predicted scores), and (c) multicollinearity. Figure 2 shows the standardized residuals (not scale scores) for each participant, illustrating that the residuals were normally distributed. A residual is the difference between an individual's actual scale score and the score the model would predict for that individual. A residual of 0 means the actual and predicted scores for that person are exactly the same, and thus, the model was accurate in predicting that score. A large residual would mean that the actual and predicted scores are different, and the model would do a poor job of predicting the individual scores. Residuals can range from negative infinity to positive infinity. Each person's standardized residual was converted to *z*-scores. Large *z*-scores represent relatively large residuals, and small *z*-scores represent small residuals. As shown, the range in *z*-scores (not actual scores) for the United States sample was about -3 to +3. The bars represent the number of participants who had a given *z*-score.



*Figure 2.* Normality of residuals: Hypothesis I.

Figure 3 shows that the homoscedasticity assumption was slightly met, as the scatter dots did not form a perfect cloud. The variance inflation factor was 1.257, signaling little to no multicollinearity among the predictors, as it did not exceed 4.

Furthermore, the correlation among the predictor variables did not exceed .80 ( $r = .452$ ).

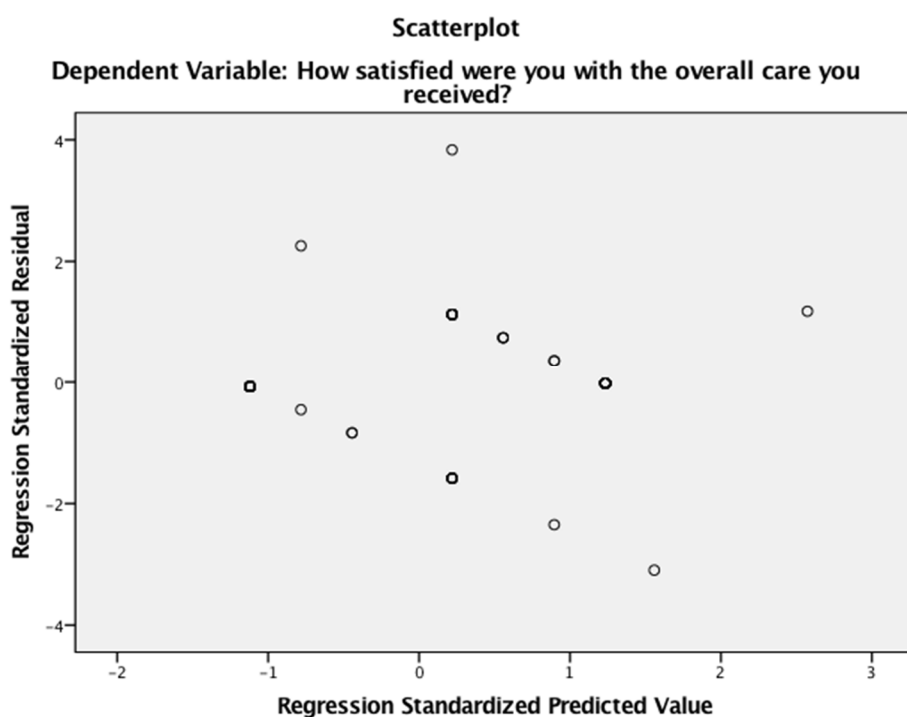


Figure 3. Homoscedasticity.

**Test of hypotheses: U.S. sample.** Multiple regression was run to determine whether people's satisfaction with public health policies and their satisfaction with their financial responsibility after medical procedures were significant predictors of overall patient satisfaction. The results in Table 3 show that public health policies and financial responsibility satisfaction were statistically significant predictors of patient satisfaction among the United States sample and have an explanatory variance of about 57% ( $R^2 = .567$ ), which is a statistically significant amount,  $F(2, 74) = 48.37, p < .001$ . As shown in Table 3, as people's satisfaction with public health policies increased, their overall level of patient satisfaction increased by 0.327 standard deviation unit,  $B = .327, t(1) = 3.81, p$

< .001. As people's satisfaction with the financial responsibility of their medical procedures increased, their overall level of patient satisfaction increased by .546 standard deviation unit,  $B = .546$ ,  $t(1) = 6.37$ ,  $p < .001$ . Thus, Hypotheses 1 and 2 were statistically supported with the United States sample data.

Table 3

*Multiple Regression Results U.S. Sample: Test of Hypotheses*

Model	Unstandardized coefficient		Standardized coefficient			Collinearity statistic	
	<i>B</i>	Std. error	Beta	<i>t</i>	<i>p</i>	Tolerance	VIF
(Constant)	0.047	0.155		0.302	.764		
Public health policy	0.423	0.111	0.327	3.810	< .001	.796	1.257
How satisfied were you with the cost you paid for your medical procedure?	0.558	0.088	0.546	6.368	< .001	.796	1.257

*Note.* VIF = variance inflation factor.

Linear regression was run to determine whether people's satisfaction with public health policies and their satisfaction with their financial responsibility after medical procedures were significant predictors of overall patient satisfaction. The results showed that public health policies and financial responsibility satisfaction were significant predictors of patient satisfaction within the U.S. participants and had an explanatory variance of about 57% ( $R^2 = .567$ ), which is a statistically significant amount,  $F(2, 74) = 48.37$ ,  $p < .001$ . As was shown in Table 4, as people's satisfaction with public health policies increased, their overall level of patient satisfaction increased by 0.327 standard



deviation unit,  $\beta = .327$ ,  $t(1) = 3.81$ ,  $p < .001$ . The results showed that the financial responsibility of patients were significant predictors of patient satisfaction within the United States sample and had an explanatory variance of about 57% ( $R^2 = .567$ ), which is a statistically significant amount,  $F(2, 74) = 48.37$ ,  $p < .001$ . As shown in Table 4, as people's satisfaction with the financial responsibility of their medical procedures increased, their overall level of patient satisfaction increased by 0.546 standard deviation unit,  $\beta = .546$ ,  $t(1) = 6.37$ ,  $p < .001$ .

### **Data Analysis: Canada**

Analyzed public health policies survey data showed a mean of 2.51 on a scale that ranged from 1 to 5, suggesting that the sample overall had somewhat negative to neutral perceptions of the public health policies that impact patient satisfaction, as the range resulted in a full distribution of responses, as the lowest score was 1 (extremely dissatisfied), and the highest score was 5 (extremely satisfied). The mean of 3.17 on a satisfaction scale that ranged from 1 to 5 suggests that the sample overall had neutral trending toward somewhat favorable perceptions of their financial responsibility for the medical procedures they had undergone, as the range resulted in a full distribution of responses, and the lowest score was 1 (extremely dissatisfied), and the highest score was 5 (extremely satisfied). The mean of 3.04 on a scale that ranged from 1 to 5 suggests that the sample overall had neutral to marginally favorable perceptions of their overall level of patient satisfaction, as the range resulted in a full distribution of responses, as the lowest score was 1 (extremely dissatisfied), and the highest score was 5 (extremely satisfied).

Skewness statistics were used to determine score distributions. As shown in Table 4, the skewness statistics for the Canada sample did not exceed  $\pm 2.00$ , so multiple regression analysis was appropriate. Given the average scores in the context of this study meant somewhat favorable perceptions, the negative skewness in this case indicated that the participants' perceptions of financial responsibility tended to be slightly favorable. Participants' perceptions of public health policy were positively skewed, which meant that participants' perceptions of the public health policies tended to be somewhat favorable, supporting the assumption that residents of Canada are satisfied with the public health policies that impact their patient satisfaction.

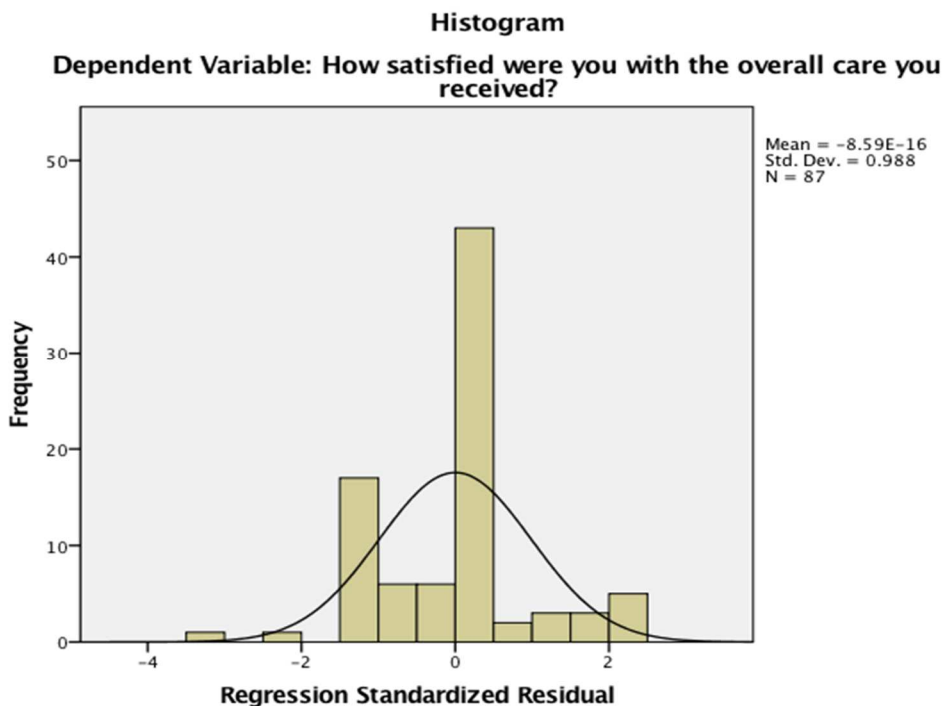
Table 4

*Variable Statistics: Canada Sample*

Variable	Minimum	Maximum	Mean	SD	Skewness
Public policy	1.00	5.00	3.51	1.03	-0.73
Financial responsibility	1.00	5.00	2.75	1.13	0.62
Patient satisfaction	1.00	5.00	2.91	1.12	0.39

**Tests of assumptions: Canada sample.** The following assumptions for multiple regression were tested and only slightly met: (a) normality of residuals (see histograms of residuals), (b) homoscedasticity (see scatterplots of standardized residuals and predicted scores), and (c) multicollinearity. Figure 4 shows that the residuals were somewhat normally distributed. Figure 5 shows that the homoscedasticity assumption was slightly met, as the scatter dots did not form a perfect cloud. The variance inflation factor was 1.60, signaling that there was weak multicollinearity among the predictors, as it did not exceed 4. Furthermore, the correlation among the predictor variables did not exceed .80

( $r = .61$ ).



*Figure 4.* Normality of residuals: Hypothesis I.

As shown in Figure 4, the histograms show the standardized residuals (not scale scores) for each participant. A residual is the difference between an individual's actual scale score and the score the model would predict for that individual. A residual of 0 means the actual and predicted scores for that person are exactly the same, and thus, the model was accurate in predicting that score. A large residual would mean that the actual and predicted scores are different, and the model would do a poor job of predicting the individual scores. Residuals can range from negative infinity to positive infinity. The histograms standardized each person's residual by converting them to  $z$ -scores. Large  $z$ -

scores represent relatively large residuals, and small  $z$ -scores represent small residuals. As shown, the range in  $z$ -scores (not actual scores) for the Canada sample was about -3 to +2. The bars represent the number of participants who had a given  $z$ -score.

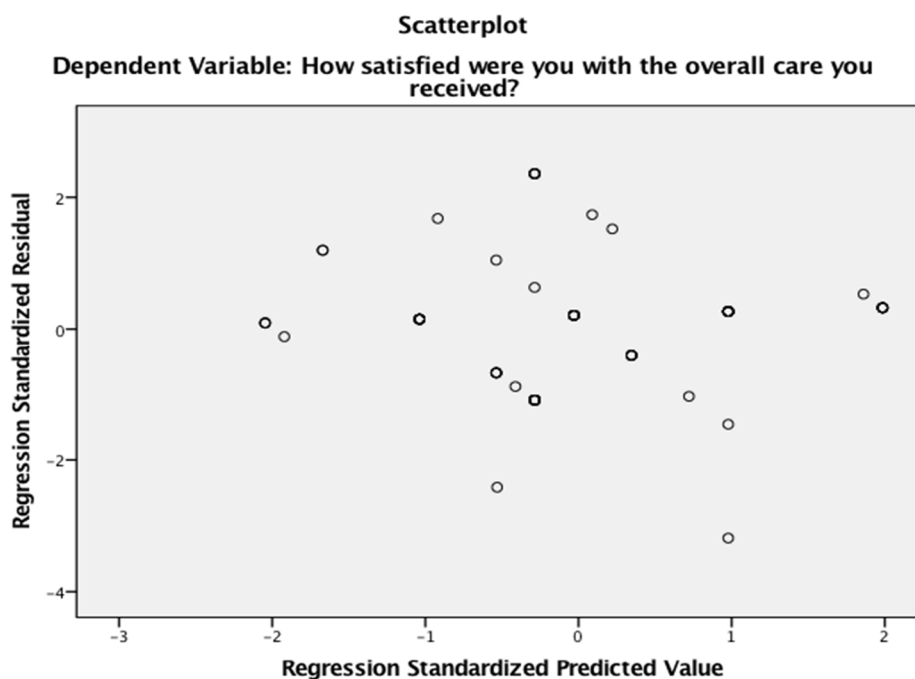


Figure 5. Homoscedasticity.

**Test of hypotheses: Canada sample.** Multiple regression was run to determine whether Canadians' satisfaction with public health policies and their satisfaction with their financial responsibility after medical procedures were significant predictors of overall patient satisfaction. The results in Table 5 show that, indeed, public health policies and financial responsibility satisfaction were statistically significant predictors of patient satisfaction among the Canadian sample and have an explanatory variance of about 74% ( $R^2 = .737$ ), which is a statistically significant amount,  $F(2,84) = 117.73$ ,  $p <$

.001. As shown in Table 6, as Canadians' satisfaction with public health policies increased, their overall level of patient satisfaction increased by 0.331 standard deviation unit,  $\beta = .331$ ,  $t(1) = 4.69$ ,  $p < .001$ . As Canadians' satisfaction with the financial responsibility of their medical procedures increased, their overall level of patient satisfaction increased by .615 standard deviation unit,  $\beta = .615$ ,  $t(1) = 8.70$ ,  $p < .001$ . Thus, Hypotheses I and II were statistically supported by these data.

Table 5

*Multiple Regression Results Among Canada Sample: Test of Hypotheses*

Model	Unstandardized coefficient		Standardized coefficient	<i>t</i>	<i>p</i>	Collinearity statistic	
	<i>B</i>	<i>SE</i>	Beta			Tolerance	VIF
(Constant)	-0.020	0.224		-	.927		
Public health policy	0.360	0.077	0.331	4.686	< .001	.627	1.596
How satisfied were you with the cost you paid for your medical procedure?	0.606	0.070	0.615	8.704	< .001	.627	1.596

*Note.* VIF = variance inflation factor.

Linear regression was run to determine whether Canadians' satisfaction with public health policies and their satisfaction with their financial responsibility after medical procedures were significant predictors of overall patient satisfaction. The results show that public health policies and financial responsibility satisfaction were significant predictors of patient satisfaction among the Canadian sample and had an explanatory variance of about 74% ( $R^2 = .737$ ), which is a statistically significant amount,  $F(2, 84) = 117.73$ ,  $p < .001$ ]. As shown in Table 6, as Canadians' satisfaction with public health

policies increased, their overall level of patient satisfaction increased by 0.331 standard deviation unit,  $b = 0.331$ ,  $t(1) = 4.69$ ,  $p < .001$ . As Canadians' satisfaction with the financial responsibility of their medical procedures increased, their overall level of patient satisfaction increased by 0.615 standard deviation unit,  $b = .615$ ,  $t(1) = 8.70$ ,  $p < .001$ .

### **Post Hoc Analysis**

The results of the initial data evaluation to determine public health care policies and their impact on patient satisfaction were further evaluated in a post hoc analysis to investigate overall patient satisfaction. The data for patient satisfaction were dichotomized using a median split, and logistic regression was then conducted for analysis to determine the likelihoods. Specifically, scores that fell above the median were classified as high satisfaction, and those that fell below the median were classified as low satisfaction. Logistic regression analysis was used to determine whether the model that included satisfaction with the health reimbursement policy and their financial responsibility as predictors provided a statistically significant explanation for participants' overall satisfaction with the medical procedure they had undergone. Tests of the two main assumptions of logistic regression were performed—sample size requirement and multicollinearity—and a model fit was examined using four different approaches. Examination of each predictor was done to determine which of the predictors were statistically significant when controlling for all others.

### **Logistic Regression Analysis: U.S. Sample**

Assumptions of logistic regression for the United States were met. First, the sample size requirement of 20 participants per predictor was exceeded in the United States, with an analytic sample size of 85. The second assumption of multicollinearity, which is the correlations among the predictors being too high (i.e., exceeding .80) was also met. The correlation between the predictors was  $r = .16$ . There were three goodness-of-fit statistics that were examined to assess how well a model that contained the two predictors performed in predicting overall patient satisfaction among the U.S. sample. First, the predictive accuracy of the baseline (constant) model (with no predictors included) was compared to that of the model that included the addition of the predictors. This was indeed the case, as the prediction accuracy of the constant model (50.6%) improved to 77.6% once the predictors were added. This would suggest that knowing about patients' satisfaction with the health reimbursement policy and with their financial responsibility related to their medical procedures did improve the accuracy with which one could predict whether they were satisfied with their overall medical procedure.

The omnibus test of model coefficients showed that the model with both predictors was statistically significant ( $\chi^2 = 34.74, N = 85, p < .001$ ). The Nagelkerke  $R^2$  value of .45 shows that 45% of the variance in predictions of overall patient satisfaction was explained by the model that included satisfaction with health reimbursement policy and financial responsibility. In examining the predictors, as shown in Table 6, both satisfaction with the policy and satisfaction with financial responsibility were statistically significant predictors of overall patient satisfaction. The higher the participants'

satisfaction with their financial responsibility ( $B = 1.95$ , Wald[1] = 13.47,  $p < .001$ ) the more likely they were to be highly satisfied overall with the medical procedure. Those patients that were highly satisfied with their financial responsibility were 6.99 times more likely to be highly satisfied with their medical procedure overall. The higher the participants' satisfaction with their health reimbursement policy ( $B = 0.74$ , Wald[1] = 8.491,  $p < .01$ ), the more likely they were to be highly satisfied overall with the medical procedure. Those patients that were highly satisfied with the health reimbursement policy were 2.09 times more likely to be highly satisfied with their medical procedure overall.

Table 6

*Logistic Regression Results: U.S. Sample*

Predictor	$B$	$SE$	Wald	$df$	Sig.	Exp( $B$ )	95% CI for Exp( $B$ )	
							Lower	Upper
Policy	0.739	0.254	8.491	1	.004	2.094	1.274	3.443
Financial reimbursement	1.945	0.530	13.465	1	< .001	6.992	2.474	19.756
Constant	-11.459	2.683	18.234	1	< .001	0.000		

**Logistic Regression Analysis: Canada Sample**

Assumptions of logistic regression for Canada were met. First, the sample size requirement of 20 participants per predictor was exceeded in Canada, as the analytic sample size was 83. The second assumption of multicollinearity, which is the correlations among the predictors are too high (i.e., exceeding .80), was also met. The correlation between the predictors was  $r = .15$ . There were three goodness-of-fit statistics that were examined to assess how well a model that contained the two predictors did in



predicting overall patient satisfaction among the Canadian sample. First, the predictive accuracy of the baseline (constant) model (with no predictors included) was compared to that of the model that included both predictors, with the hope that the accuracy would improve with the addition of the predictors. This was indeed the case, as the prediction accuracy of the constant model (57.1%) improved to 85.7% once the predictors were added. This suggests that knowing about patients' satisfaction with the health reimbursement policy and with their financial responsibility related to their medical procedures did improve the accuracy with which one could predict whether they were highly satisfied with their overall medical procedure.

The omnibus test of model coefficients showed that the model with both predictors was statistically significant ( $\chi^2 = 47.71, N = 63, p < .001$ ). Satisfaction with the health reimbursement policy was not a statistically significant predictor of overall patient satisfaction. The Nagelkerke  $R^2$  value of .71 shows that 71% of the variance in predictions of overall patient satisfaction was explained by the model that included satisfaction with health reimbursement policy and financial responsibility. In examining the predictors, as shown in Table 7, the only statistically significant predictor of overall patient satisfaction was participants' satisfaction with their financial responsibility ( $B = 1.94; \text{Wald}[1] = 13.60, p < .001$ ). Those patients that were highly satisfied with their financial responsibility were 6.98 times more likely to be highly satisfied with their medical procedure overall.

Table 7

*Logistic Regression Results: Canada Sample*

Predictor	B	SE	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Policy	1.055	0.547	3.728	1	0.054	2.873	0.984	8.388
Financial reimbursement	1.943	0.527	13.599	1	< .001	6.978	2.485	19.597
Constant	-8.694	2.457	12.526	1	< .001	.000		

**Frequency Distribution of the Dichotomized Patient Satisfaction Variable**

The median patient satisfaction score for the U.S. sample was 4 (satisfied). Scores that fell at the median were categorized as the high satisfaction group. Scores that fell below the median were categorized as the low satisfaction group. The median patient satisfaction score for the Canada sample was 3 (neither satisfied nor dissatisfied). Table 8 shows the frequency distribution of the dichotomized patient satisfaction variable between the U.S. and Canada samples.

Table 8

*Frequency Distribution of Overall Patient Satisfaction Among Canada and U.S. Samples*

Group	Frequency	Percent	Valid percent
Canada sample			
Low satisfaction	44	53.0	53.0
High satisfaction	39	47.0	47.0
Total	83	100.0	100.0
U.S. sample			
Low satisfaction	11	12.9	12.9
High satisfaction	74	87.1	87.1
Total	85	100.0	100.0

### **Summary**

This comparative and correlational research study examined the extent to which patient satisfaction was impacted by the national public health policies of the United States and Canada. This chapter included the research instruments used, the descriptive statistics, both research questions, an analytical approach of the data, testing of the assumptions of the data, testing of the hypotheses, and the data analysis using linear and logistic regression. The following chapter, Chapter 5, presents the interpretation, findings, and conclusions of the research data.

## Chapter 5: Interpretation of Findings and Conclusions

### **Introduction**

The purpose of my quantitative, comparative, correlational study was to examine the extent to which federal reimbursement impacts patient satisfaction in the United States and Canada based on two public health policies. Data were collected over a 3-month period from 195 participants who submitted an online survey, with 166 of them submitting usable data for analyses. I used regression analyses to predict a relationship between the public policies of each country with regard to patient satisfaction. Overall, low cost and financial responsibility predicted a higher level of patient satisfaction in Canada. Additionally, short wait times for scheduling medical procedures, receiving medical procedures, and receiving medical results significantly predicted a higher level of patient satisfaction in the United States. This chapter presents a discussion of my findings in light of the reviewed literature that includes the interpretation of my findings, significant findings, survey comments, recommendations, study limitations, and my final conclusions.

### **Interpretation of the Findings**

Based on my findings, the following study was one of the only studies focused on investigating and comparing patient satisfaction in both the United States and Canada based on their individual public policies. For instance, previous research in this field by Fenton et al. (2012) and Bhatia and Orsini (2014) was focused primarily on the accessibility of health care, the availability of health care, the cost of health care services,

and physician compensation in their respected nations. But there is little research on whether the patient felt satisfied.

Despite being one of the only studies focused on patient satisfaction based on policies in the United States and Canada, my results supported many assumptions from previous studies. My results supported earlier assumptions that patients in the United States are more satisfied compared to those in Canada with how quickly they were able to schedule their medical services, as predicted by Lasater et al. (2015). My results supported earlier assumptions that patients in the United States are more satisfied compared to those in Canada with how quickly they received their medical services, as stated by Koh & Sebelius (2010). My results supported earlier assumptions that patients in the United States are more satisfied compared to those in Canada with how quickly they received their medical results, as described by Lasater et al. (2015). My results supported earlier assumptions that patients in Canada were more satisfied with the cost of their health care, as predicted by Touhy, Flood, & Stabile (2004). My results supported earlier assumptions that patients in Canada were more satisfied with the cost of prescription drugs, as described by Kliff (2012).

Finally, according to the literature I reviewed, patient satisfaction is an important factor to all residents receiving any health care services in either the United States or Canada. According to my collected data, Americans are more satisfied with the accessibility and speed for scheduling and receiving their health care services than their Canadian counterparts (Elliot et al., 2016). Conversely, Canadians are more satisfied

with the overall cost associated with their health care expenditures because they are being bundled into their annual social-economic taxes (Husereau et al., 2014).

### **Limitations of the Study**

I found that my study was limited in a few ways. First, the survey eligibility was only adults 55 to 75 living in the eastern United States or eastern Canada (Eastern Standard Time Zone only) who have received health care services or treatments within the last 2 years. Second, the collected data was limited only to those recipients who had access to the Internet, saw my PhD study advertisements, took the online survey in its entirety, and submitted results to be calculated. A large portion of survey participants were also from my personal contacts in both the United States and Canada who specifically wanted to participate in my study. As such, these participants may not have been fully representative of all people who sought health care in either region during my specific study inclusion timing. Some participants could have also expressed bias and perceptual misrepresentations based on their own lifetime medical experiences from various health care providers and persons in other health care settings.

### **Recommendations**

The following section includes a breakdown of my significant findings and my recommendations. The public health policies of both the United States (ACA) and Canada (CHA) have dictated how health care legislation has been passed and implemented in each country, which has had an overall effect on residents' level of satisfaction. The health care policies of the United States accounted for a statistically significant amount of variance in Americans' patient satisfaction scores for people 55 to

75 who had undergone medical procedures in the past 2 years. Previous research has also supported that more than half (63%) of U.S. residents reported being extremely satisfied with their wait times to schedule their medical procedure (Kennedy et al., 2014).

In contrast, health care policies in Canada accounted for a statistically significant amount of variance in Canadians' patient satisfaction scores for being unsatisfied. Similarly, previous research has indicated that more than half of Canadian residents (65%) were unsatisfied with the wait times to receive their medical procedure (Allin & Rudoler, 2014). The results of this study showed that 50% were somewhat dissatisfied and 18% were extremely dissatisfied with the wait time to schedule a medical procedure, 51% were somewhat dissatisfied and 17% were extremely dissatisfied with the overall wait times to receive their medical procedure, and 43% were somewhat dissatisfied and 12% were extremely dissatisfied with their wait times to receive the results of their medical procedure.

Further, health care reimbursement policies of Canada predicted the  $R^2$  percent change of variance in country-specific patient satisfaction scores for persons aged 55 to 75 who had undergone medical procedures in the past 2 years. Additionally, the financial responsibility of patients in the United States accounted for a statistically significant amount of variance in patient satisfaction scores. This finding held true among the Canadian sample as well.

Based on my findings, this quantitative and comparative study successfully measured and reported patients' overall levels of satisfaction after receiving medical services. My recommendations are that patients in the United States are more satisfied

than the patients in Canada based on shorter wait times for scheduling and receiving their medical procedures. My recommendations are also that patients in Canada are more satisfied than patients in the United States based on the reduced cost of medical treatments.

I constructed my research to measure statistical data, and I found that by using logistic regression, I could confirm that decision theory does explain why the participants responded the way they did. This was useful to me in terms of identifying the values of human behavior because human behavior values determine a patient's overall level of satisfaction. Also, decision theory is commonly used to examine human behaviors that influence other factors, such as patient satisfaction (feeling satisfied). By analyzing this research, I helped to fill the gap described by Koh and Sebelius (2010) by determining the causes and effects of satisfied and unsatisfied patients in two similar geographic regions. My statistical findings have recommendations for future public health policies that could be implemented in any industrialized nation.

### **Implications for Social Change**

I define the concept of social change as the human interaction that transforms our individual cultures, behaviors, social structures, and social institutions. Based on my findings, neither the United States nor Canada have perfect health care policies, and this suggests that there is still a need for increased understanding of a better patient health care system. My research determined that a patient's level of satisfaction is related to their health care experience, and therefore, this topic needs to be explored in more detail. Even though substantive research has addressed public health care policies, there is still a



need for increased understanding of positive patient satisfaction in the field of health care (Kennedy et al., 2014). Determining a connection between patient satisfaction and a specific public health care policy may influence legislators to enact similar policies and promote positive social change, better health, and satisfaction for their patients.

Based on my findings, patients in the United States reported higher satisfaction scores with the health care they received than Canadians did. Canadians appeared slightly more satisfied with the overall cost associated with their health care, and Americans reported higher satisfaction scores regarding how quickly they could schedule, receive, and obtain the results of their medical procedure. Both countries agreed that the Canadian marketplace offered prescription drugs for less cost than the American pharmaceutical marketplace.

The impact of public opinion on national public policy has the ability to change legislation based on how people think. Burstein (2003) stated that the impact of public opinion is substantial to creating public policy that is influenced by social change. Public opinion impacts public policy and generally increases the salience of issues due to continual influence by special interest groups, political parties, elites, and social movement organizations that, over time, cause governments to change their public policies (Burstein, 2003).

### **Survey Comments**

Attached at the end of my online survey, I included a text box that allowed subject participants to enter their personal email address to receive a copy of my survey results once analyzed and completed. Unfortunately, I did not put a maximum allowance on the

number of figures that could be entered into the box and therefore, received numerous comments regarding participants' health concerns instead of participants' personal email addresses. Although I received mostly email addresses, I received thirteen patient comments and felt these comments were informative in nature, and I chose to include them as part of my research and not edit them out. Below are the comments that I received entered into the text box at the end of their completed online survey:

- “I live in Quebec and was told I had to wait 16 weeks to get an MRI of my knee. I couldn't wait that long due to my pain and instead drove to Vermont to get my MRI the same day I called.”
- “Being a U.S. veteran, I can now go to any health care facility in the country without having to wait for the VA to schedule me. This is a great benefit for me and I am finally happy with my health care.”
- “My Canadian health coverage was much better when I was younger, now that I'm 70, its much worse.”
- “I lost my primary physician and most of my health care coverage with the ACA. I have been able to find a new MD and better coverage, but for more money than before.”
- “The taxes are too high in Canada and the wait times for health care appointments are too long.”
- “I lost my physician and my coverage after the arrival of the ACA, but since have found a new physician and additional coverage.”

- “I get my medical services in the United States, but I get my prescription drugs from Canada.”
- “The wait times in Canada can really linger, but the bill is absorbed with our taxes. It is what it is.”
- “I live on the Canadian/U.S. border and utilize both countries for whatever suits me best. I get most of my medical services in the United States and get all my prescription drugs from Canada.”
- “The health care in Canada keeps getting worse. I guess this is what happens when a substitute teacher becomes Prime Minister.”
- “I moved to the United States from Canada, it’s much quicker to get care in the States than in Canada.”
- “My Canadian health coverage was better when I was younger.”
- “Since I’m 63 years old, I cannot get radiation therapy for my cancer in Canada, so I drive to Detroit Michigan to get my treatments.”

This concludes the list of comments I received on my online survey.

### **Conclusion**

My quantitative and comparative analysis successfully measured patients’ overall levels of satisfaction after receiving their medical services. I found that the public health policies of both the United States (ACA) and Canada (CHA) dictated that health care legislation does have an overall effect on a person’s level of satisfaction. I found that patients in the United States were more satisfied than the patients in Canada based on shorter wait times for scheduling and receiving their medical procedures. I found that

patients in Canada were more satisfied than patients in the United States based on the reduced cost of their medical treatments. I found that patients in the United States were more satisfied with how quickly they scheduled their medical services versus the length of time it took to schedule those services in Canada. I found that patients in the United States were more satisfied with how quickly they received their medical services versus the length of time it took to receive those services in Canada. I found that patients in the United States were more satisfied with how quickly they received their medical exam results versus the length of time it took to receive those results in Canada.

By analyzing my research, I helped to fill the gap in determining how public health care policies impact patient satisfaction. Health care is a trillion-dollar industry that affects every man, woman, and child. Maintaining good health is necessary for anyone trying to live a long, happy life. Without national public policies in place to implement and support a sustainable health care system, human life would decline drastically. Health care is an important topic to anyone with a pulse, and the need for easily accessible, high-quality, and affordable health care impacts everyone. According to my research, the survey respondents in the United States produced higher patient satisfaction scores than Canadian survey respondents based primarily on wait times and the abundant choices they have for selecting a physician.

It appears that Americans are satisfied paying for their health care services, as long as they are quick and convenient. However, in Canada, health care is part of the social contract between government and citizens, residents, and guests. The majority of Canadians have a blend of the complimentary national health care along with purchased

private insurance. Overall, taxes are much heavier in Canada than the United States, but they provide a safety net for residents and bring a tremendous amount of social good in several areas, health care being just one.

The CHA was created and implemented to expand health care coverage across Canada and charge residents for their medical services through their annual taxes. This proved to be a positive factor for Canadians, and I found in my research that 71% of the variance in overall patient satisfaction was explained by the model that included satisfaction with health reimbursement policy and financial responsibility. This means that Canadian patients that were highly satisfied with their financial responsibility were 6.98 times more likely to be highly satisfied with their medical procedure overall.

In the United States, the health care system is a capital-driven model for which only emergent cases covered under the Emergency Medical Treatment and Active Labor Act are part of the social contract. This means that any American without health care insurance could find themselves staggered in debt and possibly lose their home, their job, or even their dignity because they could not afford to pay their basic health care bills. Having adequate health care insurance coverage in the United States is the only way to fully afford the benefits of the American health care system.

The ACA was created and implemented to expand access to health care coverage, focus on illness prevention, increase medical patient protections, and promote evidence-based treatments to decrease the rising costs of health care. In the socialized worlds of Canada, Europe, and most other industrialized countries, they have modeled a social contract system to prevent a fee-for-service health care system while absorbing health

care costs with tax dollars. However, they all are running into economic problems trying to finance their health care services and curtail the interminable and incessant wait times for their residents to get medical treatments.

It is difficult to determine who is truly more satisfied—Americans or Canadians—because both countries’ individual health care policies have their own strengths and weaknesses, and both countries seem somewhat satisfied with their current health care systems. The CHA guaranteed that Canadian residents receive health insurance at minimal health care costs, but patients still have difficulty accessing quality health care due to their lengthy wait times and lack of specialty physicians in the country. The ACA allows American residents to choose their health insurance options, and patients have little difficulty accessing quality health care and accessing a plethora of specialized physicians and are able to schedule same-day health services if needed.

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## Appendix A: Survey Screening Form

1. Do you live in the Eastern United States or Eastern Canada?  
 YES  
 NO
2. Are you between the ages of 55–75?  
 YES  
 NO
3. Have you had a medical procedure within the last two years?  
 YES  
 NO
4. If you live in the United States, was your medical insurance provided by Medicare, Medicaid, and/or Private Insurance?  
 YES  
 NO  
 N/A
5. If you live in Canada, was your medical insurance provided by Canadian Health Services, Private Insurance, or both?  
 YES  
 NO  
 N/A

**YOU MUST ANSWER YES TO 4 QUESTIONS TO QUALIFY FOR THIS SURVEY**

## Appendix B: Patient Satisfaction Survey

6. How satisfied were you with the amount of time it took to schedule your medical procedure?

- Extremely Satisfied
- Somewhat Satisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Dissatisfied
- Extremely Dissatisfied

7. How satisfied were you with the amount of time it took to receive your medical procedure?

- Extremely Satisfied
- Somewhat Satisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Dissatisfied
- Extremely Dissatisfied

8. How satisfied were you with the amount of time your provider spent with you addressing your medical needs?

- Extremely Satisfied
- Somewhat Satisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Dissatisfied
- Extremely Dissatisfied

9. How satisfied were you with the cost you paid for your medical procedure?

- Extremely Satisfied
- Somewhat Satisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Dissatisfied
- Extremely Dissatisfied

10. How satisfied were you with the overall care you received?

- Extremely Satisfied
- Somewhat Satisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Dissatisfied
- Extremely Dissatisfied

Please provide your email address if you would like the results of this survey sent to you after it was completed.

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