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Strategies for Hospitals After Implementation of Reimbursement Cuts to the Outpatient Prospective Payment System

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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MBA, Rider University, 2005

BS, Kean University, 2003

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Healthcare costs have continued to increase in the United States. The Centers for Medicare and Medicaid Services (CMS) have proposed policy changes to reduce inequities between hospital outpatient centers and independent freestanding facilities when reimbursing for the same service. The purpose of this quantitative study was to explore if there was a difference in the payments to the Outpatient Prospective Payment System between the years 2017 and 2018 to assist hospital administrators in preparing for Medicare reimbursement cuts. The study was grounded in the agency theory and aimed to determine the relationship among the provider, payer, and patient. The research questions were designed to determine a statistically significant relationship between the reimbursement of monies for outpatient and inpatient billing between 2017 and 2018. The descriptive quantitative study utilized publicly available secondary data published by CMS to see if there was a change in outpatient and inpatient payments and procedures billed to Medicare between 2017 and 2018. The sample size for this quantitative study was 64 and was limited to New Jersey hospitals. The statistical analysis used for this study was the paired-samples Wilcoxon test to determine whether there was a statistically significant difference between the three variables chosen. The results from this study showed a statistically significant difference in outpatient payments, services, and inpatient hospital volume from 2017 to 2018. There was an increase in outpatient spending and volume and a decrease in inpatient volume. The findings of this study will help hospital administrators create positive social change by closing the healthcare equity gap, increasing transparency in healthcare costs, and promoting patient-centered care.

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Dedication

I want to dedicate this dissertation to my parents, John and Benita Koliniatis. Their guidance and support in my education started early and has continued throughout this process. Their encouragement was monumental in finishing my doctoral journey. Without them, reaching this milestone would not have been possible.

I want to give a special thanks to my supportive and loving husband, Chris, and my beautiful children, Gianna and Giovanni. Without their constant encouragement and reassurance, starting and completing this doctoral experience would not be possible.

A big thank you to my siblings Theresa and John Dimitrakis and Stephanie and Eric DiPietro, for always being there to listen during the good and challenging times of this endeavor. I would also like to thank my in-laws, Connie Boscia, Richard Boscia and Marie Boscia for their continued support during this latest chapter of my education.

To Gianna, Giovanni, Nastassia, Nicholas, and Alivia. Dream big and reach for the stars. You can accomplish anything you set your mind to. I love you all.

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I want to acknowledge Dr. Sally Willis for her continued support and encouragement throughout the dissertation. Her dedication to and time spent on my success are much appreciated. I am grateful to my committee members, Dr. Frederiksen-England and Dr. Hijazi, for their guidance and support.

I would like to extend a special acknowledgment to Dr. Zin, who has supported me throughout defining the dissertation's methodology to completing the data analysis. His time and guidance have been instrumental in continuing my journey when times were challenging throughout the process.

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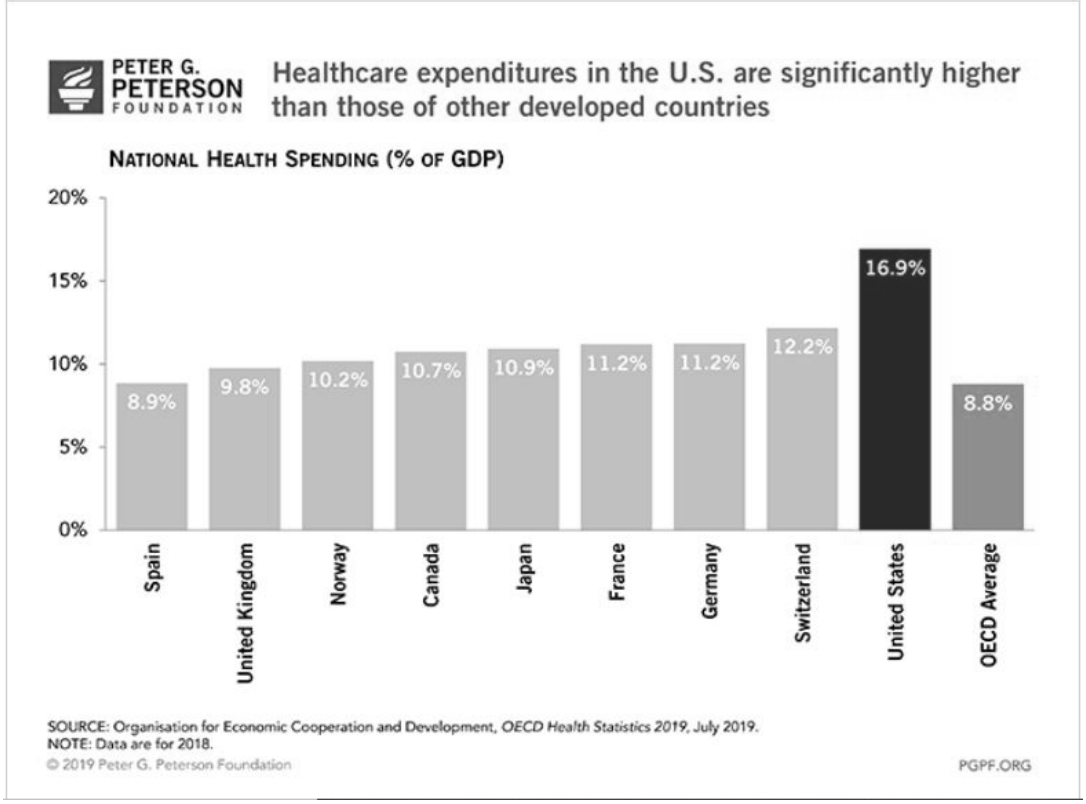
Section 1: Foundation of the Study and Literature Review

High healthcare costs have become a significant problem in the United States (Papanicolas et al., 2018). According to the Organization for Economic Co-Operation and Development (OECD; 2019), the United States' spending on healthcare is one of the highest globally (see Figure 1). The United States spent $3,492.1 billion on healthcare expenditures in 2017, and Medicare spending has increased by 2.9% to $581.9 billion in the same year (American Medical Association, 2019; Centers for Medicare and Medicaid Services, 2019). Some states saw higher increases than others. For example, between 2012 and 2016, New Jersey healthcare spending went up by 18% compared to 15% nationally (Livio, 2019). As such, the healthcare field has become an area of focus by the Centers for Medicare and Medicaid Services (CMS) due to rising healthcare costs.

Figure 1

Healthcare expenditures in the United States



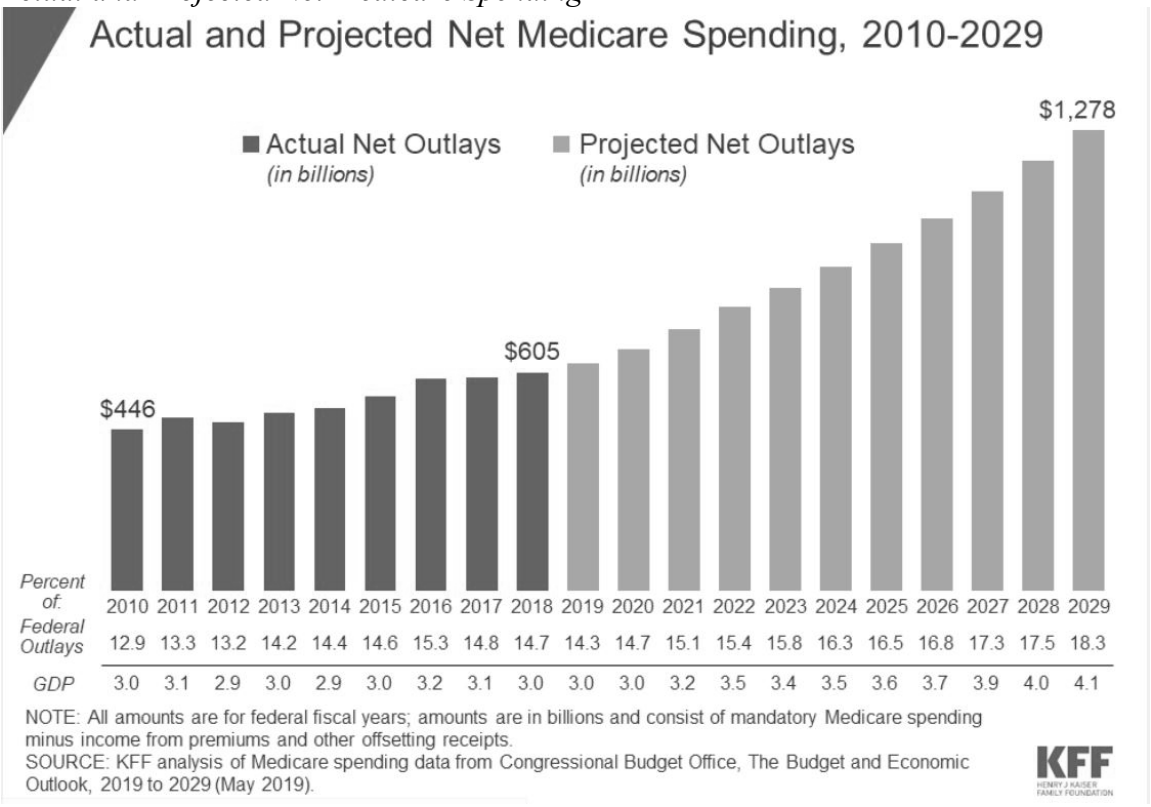
Note. From "Healthcare expenditures in the U.S. are significantly higher than those of other developed countries," by Peter G. Peterson Foundation, 2019. https://www.pgpf.org/blog/2020/07/how-does-the-us-healthcare-system-compare-to-other-countries

Medicare is a federal program that provides reimbursements to organizations that provide care to its beneficiaries. The Medicare program was enacted on July 30, 1965, to provide health insurance to 65 years and older individuals who need medical care without the burden of high out-of-pocket costs (Blumenthal et al., 2015). Due to an increase in enrollment since the program's inception, outpatient hospital care rose to $64.2 billion of

the overall Medicare spending in 2017. The Office of the Actuary estimated this to be around 7% of the total Medicare spending in 2017 (MedPAC, 2019). The federal government has estimated that per capita health expenditures reached $10,739 in 2017 and will continue to rise by 5.5% annually over the next decade (Gee, 2019). Reforms to the hospital sector will be needed to contain the rising costs to the U.S. healthcare system (see Figure 2). Healthcare leaders must be knowledgeable about proposals introduced by CMS for reimbursement changes to contribute to the reduction of the expenses to the U.S. system while creating strategic objectives to remain viable.

Figure 2

Actual and Projected Net Medicare Spending



Note. From "Actual and Projected Net Medicare Spending, 2010–29," by the Kaiser Family Foundation, 2019. https://www.kff.org/medicare/issue-brief/the-facts-on-medicare-spending-and-financing/

The location where the healthcare service is provided should not be a factor in reimbursing different facilities for the same exam (CMS, 2018). The health exams conducted in outpatient centers associated with a hospital are currently more costly for Medicare due to the higher reimbursement payments to these facilities under the Outpatient Prospective Payment System (OPPS) (Brady, 2019). CMS introduced a new proposal in 2019 and again in 2020 to overcome the high costs of reimbursing hospitals and reduce the expenses incurred by the Medicare system (CMS, 2019). These recommendations for reductions are a concern for hospital leaders who rely on reimbursements to continue growing and meet the needs of the communities they serve (Daly, 2018). CMS presents these OPPS changes and moves toward site neutrality to reduce the gap in payment for the same exams performed at different locations. As the current healthcare landscape is moving toward the quality of care as a focus and reducing the increasing healthcare costs, CMS has proposed policy changes to drive the future of healthcare toward value care at lower prices (Blumenthal et al., 2015). Section 1 contains the background, the problem statement, the purpose statement, the research questions and hypotheses, the theoretical framework, the nature of the study, the literature review, definitions, assumptions, and study limitations.

Background

Medicare began using the OPPS in 2000. In 2015, approximately 3,800 hospitals offered OPPS services (MedPAC, 2016). A significant problem for Medicare is that provider-based departments provide the same services that a patient can receive at a provider's office but receive higher Medicare reimbursement under the OPPS than under the physician fee schedule (PFS). Another problem for Medicare is the increase in the utilization of outpatient services due to this higher reimbursement model (Rubio, 2018). This inequity in payments for the same services is an area of needed change for CMS (CMS, 2018). A gap in the knowledge is if continued increases in Medicare OPPS payments warrant a change in how the reimbursement schedules are proposed and finalized each year to help contain rising costs. If the agency can implement site-neutrality policies, it may help reduce Medicare's cost for these hospital outpatient services (Ericson, 2018).

According to CMS (2019), there are two ways to reimburse outpatient procedures through Medicare. The payment model depends on the location of the service. Those performing care services at a hospital outpatient department are compensated using the hospital OPPS. When performing the same exam at an independent office, the claim is reimbursed under the Medicare Physician Fee Schedule (MPFS; Price et al., 2016). In 2015, the Bipartisan Budget Act was signed, which states that hospital outpatient departments that started submitting claims on or after November 2, 2015, would not be paid for many services under the Medicare OPPS payment models after January 1, 2017 (Dyrda, 2017). In 2017, a change in Section 603 of the Bipartisan Budget Act of 2015

revised the exemption status of provider-based departments (Rubio, 2018). The amendment stated that a hospital outpatient department that has accepted patients before December 2, 2015, will be exempt from the Bipartisan Budget Act's site-neutrality clause ruling (Dyrda, 2017). This change will alter the billing for outpatient exams that Medicare currently reimburses under the higher OPPS system.

Medicare reimburses providers based on codes submitted for services provided. In 2019, CMS finalized a ruling that would affect the reimbursement models used by hospitals that billed for services performed in their outpatient centers. This move would be one effort by CMS to allow for equal payments to be made for the same service regardless of where the exam was performed (Turcotte, 2018). Over 2 years, there will be a phase-in for the site-neutral payment reductions for the clinic visit Healthcare Common Procedural Coding System (HCPCS) code, G0463 (Hemme et al., 2019). The implementation will occur over 2019 and 2020 to reduce the financial impacts.

After implementing the two rounds of cuts, Medicare expects to save $610 million while saving patients approximately $150 million in copayments due to the absence of payment differences for choosing a doctor's visit in an office or an off-campus hospital outpatient department (Dickson, 2018; Rubio, 2018). These savings will help reduce the increase in outpatient spending that Medicare has reimbursed. In 2001, the first year OPPS was established, total spending was $20.1 billion (MedPAC, 2016). CMS estimated that the Medicare program spent $1.9 billion more in 2017 on OPPS payments because of the difference in the payment rate for clinic visits done in a hospital outpatient department versus a physician visit (MedPAC, 2019).

The higher reimbursements for hospital services rendered in an outpatient facility have been under scrutiny by CMS for many years. The hospital-owned outpatient centers were once exempt from the reduction in reimbursements for the outpatient services provided due to the passing of the Bipartisan Budget Act of 2015 (Agrawal, 2015; Turcotte, 2019). Hospitals owning off-campus facilities are still being given reimbursement monies under the higher OPPS fee schedule. An off-campus center is a facility that is located more than 250 yards from the hospital's central campus (Hellow, 2015).

CMS proposes that these outpatient centers owned by hospitals receive payments using the MPFS to reduce expenditures. The MPFS is the fee schedule used to reimburse physicians for services rendered in an outpatient center not associated with a hospital. This change will mainstream payments for the performance of an exam regardless of what outpatient facility the patient chooses, which increases patient choice about where to have exams performed and reduces costs (Heath, 2018). Equal payments for the same service will decrease the expenses incurred by Medicare and put healthcare organizations in a position of revenue losses because of the introduction of equal payments regardless of the location for the performance of the service. The movement toward site neutrality will create the need to reevaluate prior successful hospital strategies in acquiring physician and outpatient offices to receive higher reimbursements for exams (Price et al., 2016).

Challenges exist in healthcare for organizations to deliver the best care to the communities they serve while remaining viable. The recent site-neutral payment changes

have been complex for hospitals with off-campus-provider-based departments (Turcotte, 2018). Hospital administration must maintain the successful sustainability of an open system organization that is affected by many external and internal variables (Teel, 2018). The knowledge gap was addressed by presenting an analysis of collected Medicare data for the OPPS billing can be helpful to make leaders aware of the necessary changes to continue to have the resources to keep up with future policy changes. Using the agency theory as a framework helped assess the contractual relationships among the payers, the patient, and the provider.

Problem Statement

Hospital outpatient centers are no longer be exempt from receiving the higher reimbursement fees from 2018 on, reducing the revenue coming into the hospital (Firth, 2018). The CMS final ruling for OPPS payments equalizes reimbursement payments for Medicare patients who go to a provider's office or a hospital-owned outpatient center for the same visit, saving CMS around $380 million in 2019 (Rodriguez, 2019).

Hospital-owned facilities far enough from the main building continue to receive payments under the higher OPPS fee schedule. Due to the necessity to control spending and reduce the significant reimbursement gap between outpatient and inpatient services, the CMS is implementing cost-containment policies that will affect the hospital outpatient sector (Firth, 2018; National Association of Healthcare Revenue Integrity [NAHRI], 2018). To reduce expenditures, CMS proposed that these outpatient centers owned by hospitals would also be paid under the MPFS, the fee schedule used to

reimburse physicians for services rendered in a doctor's office not associated with a hospital (CMS, 2019).

In 2019, a phase-in of the ruling over 2 years will be implemented to offset the consequences of one total reduction. The hospitals will see a 30% payment reduction in 2019 and a 60% reduction in 2020 for submitted outpatient services rendered (Vernaglia & Shanker, 2018). The loss in revenue for the hospital will challenge administrators who budgeted for the OPPS reimbursement to fund strategic initiatives (Lane et al., 2018).

The HCPCS is one method put forth by Medicare that assigns a number to procedures and services for consistency in processing claims. The problems are the potential negative impact changes to OPPS can have on hospitals after policy changes are implemented, the effect on the organization's viability, and the influence on the delivery of care to the patient.

In 2018, The Healthcare Financial Management Association estimated the financial impact of costs from the OPPS implementation in Indiana (Alessandrini & Gookins, 2019). The gap in the research regarding the impact of this change is the absence of data on the economic impact of this reduction in Medicare reimbursements for hospitals in New Jersey. The internal costs for hospitals are increasing, and CMS payments are declining, so the financial pressures on leadership are increasing (Lane et al., 2018; NAHRI, 2018). The current environment in healthcare, where there is a reduction in CMS payments for Medicare services provided, is of concern to leadership because it makes forecasting growth trends and associated spending more challenging. If hospital administration does not keep up with the new outpatient reimbursement methods

and decreasing payments and finds ways to remain viable, there could be detrimental consequences, including closures due to adverse financial impacts (Bannow, 2017; Mobatuwana et al., 2017).

Purpose Statement

The purpose of this secondary quantitative data study was to determine whether the CMS reimbursement cuts to the OPPS fee schedule are needed due to a yearly increase in the OPPS payments to healthcare organizations given to hospitals in New Jersey for Medicare services rendered for calendar years 2017 and 2018. This study showed a significant increase in the usefulness of the OPPS reimbursement program and approach from 2017 to 2018. This evaluation helped establish whether there will be an additional financial hardship for hospital leaders to overcome. The independent variables were revenue, inpatient hospital volume, and the number of outpatient procedures billed. The dependent variable was Medicare revenue. The analyzed years were 2017 and 2018.

Healthcare leaders may use the study's outcome to see whether a need exists for hospitals to increase revenue in innovative ways to remain successful. The results may also assist administrators in coming up with future financial goals to overcome losses in reimbursements, which lead to poorer health outcomes (Eramo, 2018; LaPointe, 2019; Teel, 2018). The study may impact potential policies and strategies when realizing the overall economic consequences affecting the healthcare system. The study can be the foundation for future testing to see the long-term financial effects of the continued Medicare cuts on the healthcare system in years to come.

Research Questions and Hypotheses

RQ1: Is there a statistically significant difference in the revenue for OPPS for the years 2017 and 2018 for the state of New Jersey?

$H_0$1: There is no statistically significant difference in the revenue in the OPPS for the years 2017and 2018.

$H_1$1: There is a statistically significant difference in the revenue for the OPPS for the years 2017 and 2018.

RQ2: Is there a statistically significant difference in inpatient hospital volume between the years 2017 and 2018 for the state of New Jersey?

$H_0$2: There is no statistically significant difference in inpatient hospital volume between the years 2017 and 2018.

$H_1$2: There is a statistically significant difference in inpatient hospital volume between the years 2017 and 2018.

RQ3: Is there a statistically significant change in the number of outpatient procedures billed to Medicare over the years 2017 and 2018 for the state of New Jersey?

$H_0$3: There is no statistically significant difference in the number of outpatient procedures billed to Medicare over the years 2017 and 2018.

$H_1$3: There is a statistically significant difference in the number of outpatient procedures billed to Medicare over the years 2017 and 2018.

Theoretical Framework

A theory in quantitative research is a defined set of variables that the researcher forms into hypotheses to show a relationship among the variables after a problem has

been identified (Creswell & Creswell, 2018). Authors may be drawn to the theories related to the discipline and share the individual's worldview and perspectives (Burkholder et al., 2016). Once an idea creates a specific question, exploration of the topic can be pursued with a theoretical framework that helps to guide and strengthen an individual's research project. The theoretical framework foundation for this study was Stephen Ross's (1973) agency theory.

Agency theory addressed the problems of compensation contracts, and the agency can be seen as an incentive problem. Further research on the agency theory provides an additional application to the healthcare field. Barry Mitnick elaborated on this theory by discussing the economics of the theory and how choosing a compensation method can produce a behavior by the agent that is wanted by the principal (Mitnick, 2006). This approach describes a principal-agent relationship in healthcare where the state is involved in the overall regulatory framework on which contracts are based. Forgione et al. (2005) referenced Stanley Baiman to address the contractual relationships between parties that seek to achieve their economic interests as described in the agency theory. These contractual relationships are created among the payer, the provider, and the patient. The framework has also been characterized by a cycle of increased regulatory involvement, and as the market responds to the regulation, additional regulatory actions are implemented (Tuohy, 2003). The decisions made by contracting individuals can be looked at from the agency theory perspective (Forgione et al., 2005).

The agency theory looks at the regulatory process from the point of view of each group involved. In agency theory, the individuals involved are motivated to achieve

outcomes that meet the expectations of their self-interests. A problem arises when the best decision for the group's good does not meet each party's expectations in a contractual agreement. When the choices made are not aligned with the behavior expected by each party, the whole can begin to experience inefficiencies, which can create negative consequences for everyone in the relationship (Tuohy, 2003).

Baiman (1990) stated that each party in a contractual relationship has its own best economic outcome as the main priority. In healthcare, a contractual relationship exists among the payor, the provider of care, and the patient. Medicare wants to control costs, the patient wants to receive quality care, and the provider wants to maximize the reimbursement received to provide the care. All parties have clear objectives to achieve their expected outcomes. Although each may prioritize their economic interests, it may conflict with the other agent's goals (Forgione et al., 2005). Therefore, this model was appropriate because it gives insight into what decisions are made regarding incentives and the problems with compensation contracting (Mitnick, 2006).

Nature of the Study

This research used secondary quantitative data to see how significant CMS policy changes affect the decrease in revenue brought in by the hospital outpatient facilities, which was the primary focus of this doctoral study. The quantitative approach allows the researcher to gather information to report findings and draw conclusions (Babbie, 2017). The established research questions for this study helped conclude what method was best for the research and data collection.

The collected data from archived databases provided secondary quantitative data for OPPS evaluation from 2017 to 2018. The use of quantitative data can be applied to real-world situations and help find needed solutions to identified problems (Burkholder et al., 2016). The paired-samples *t*-test analysis allowed comparing the independent and dependent variables over time. The Wilcoxon signed-rank tests were performed where the assumptions of the paired-samples *t*-test were not met. The dependent variables—revenue, hospital inpatient hospital volume, and the number of outpatient procedures billed to Medicare—were analyzed with a grouping factors year 2017 and 2018. To conclude the study, this quantitative statistical analysis showed the extent of revenue changes during Medicare cuts for reimbursements.

A Review of the Professional and Academic Literature

The literature review provided the foundation for the appropriateness of the quantitative research study. Using the review process can help the researcher identify a gap in the literature and come up with a problem statement. The purpose of this secondary quantitative data study was to explore the economic effects of the newly implemented OPPS fee for reimbursements that are given to hospitals in New Jersey for Medicare services rendered for calendar years 2017–18. The CMS is implementing cost-containment policies that will create site-neutral payments and financially affect the outpatient hospital sector (Firth, 2018; NAHRI, 2018). An essential first step in the research is determining the problem statement, which lets the reader know the difficulty and what questions need to be answered (Brown, 2013). The literature review demonstrates an understanding of the topic and helps the researcher choose the

theoretical framework and methodology for the posed research question. An analysis of the literature establishes the importance of the current study involving the updated CMS OPPS and site-neutrality payments for healthcare services. A review of the academic literature provided a greater understanding of the Medicare system and the policy changes to reduce costs to the United States health system while improving the quality of care given to individuals.

Understanding the current literature helped the researcher understand the current methodology and guide future works in the same discipline. The new findings can build on the old results to see whether any relationship exists (Creswell & Creswell, 2018). A literature review that is not comprehensive can lead to research that is not grounded in theory and methodologically weak, and does not contribute to original works within the field (Maggio et al., 2016). The articles discussed explained the current Medicare system and the need for leadership to develop strategies to overcome reimbursement cuts and remain viable while delivering the level of care expected by all parties.

Literature Review Search Strategy

This literature review is a collection of summaries and descriptions of the need for Medicare changes to OPPS policies to mainstream costs and save the program and beneficiaries millions of dollars. The review showed the financial pressures placed on hospitals due to the implemented policy changes. The literature review strategy was to search various databases to obtain articles that pertained to this study. Peer-reviewed articles, white papers, research studies, and MedPAC reports were used to discuss the main variables of the dissertation. The main topics were identified, and pertinent

keywords were chosen to find peer-reviewed articles that would guide the current analysis of the OPPS. The databases used for the search were ProQuest Health & Medical Collection, Walden University Library, Google Scholar, MEDLINE, CINAHL, ScienceDirect, Business Source Complete, and AB/INFORM Collection.

The keywords used to search for literature were *reimbursement, Outpatient Prospective Payment System, New Jersey, payment cuts, hospital outpatient center, Medicare, United States, healthcare system, costs, transparency, site neutrality, clinic visits,* and *Bipartisan Act of 2015*. Conducting a literature review and documenting a list of relevant articles provides a history of the topic discussed. The literature search focused on peer-reviewed journals and search items within the 5 years of 2015–20. These articles will assist in creating alignment within all the sections of the research study.

Financial Pressures

Hospitals have continued increased financial pressures due to decreased Medicare and Medicaid reimbursements. A study conducted by Ly and Cutler (2018) showed results from a retrospective analysis of United States acute care hospitals between 2003 and 2013. The purpose of the article and the research questions were clearly defined. The study aimed to show hospitals' financial impact due to policy changes. The financial pressures hospitals face can lead to decreased quality of processes and the inability to continue operating due to a loss of revenue. The study mentioned limited research on strategies to remain viable during these changing times of reimbursement cuts, which shows a gap in the discipline (Ly & Cutler, 2018).

According to the 2018 State of the Industry Survey, conducted by Managed Healthcare Executives, a list of top challenges was created to understand the pressures leadership face, which can hinder the ability to run a healthcare organization successfully (Appold, 2019). The results showed that 32% of those who took the survey chose government regulations and executing policy changes as significant concerns (Appold, 2019). Dietsche (2019) highlighted the findings of a survey conducted by Porter Research in 2018 with 100 healthcare executives. The researchers found that declining reimbursements and cost pressures were significant concerns for healthcare systems. Leadership identified vital initiatives to overcome increased financial constraints and improve the patient experience.

The efficient management of healthcare organizations' revenue cycle can be instrumental in maintaining success in the current economic situation that leaders face. Reimbursement models are changing, and hospitals now face a more significant share of risk to receive maximum monies (Murphy, 2016). Improvements to the current processes are needed in the clinical setting, and the proper resources should be allocated to provide the best care to the patient (Murphy, 2016). Leaders of hospitals should look at three main areas for reform: financial, technical, and operational. Assessing these three areas can help with strategic planning when federal policies are now changing the reimbursements expected to bring in revenue for the organization. The movement of patients' services from inpatient to outpatient settings has shifted decisions for healthcare organizations, and new methods must be implemented to overcome the challenges of Medicare and its reimbursement proposals (Murphy, 2016). The Medicare inpatient-only

list provides procedures that can only be performed inpatient and are not reimbursed under OPPS. Each year, requests are presented to CMS to identify procedures that can be removed from the inpatient-only list and can be safely performed in an outpatient setting.

A survey conducted by the American Hospital Association (AHA; 2019) analyzed the effects of hospital acquisitions on costs and the quality of care. Since the dynamics of hospitals are quickly changing, there are financial pressures to provide high-quality care at a reduced price. Overcoming the challenges faced and being fiscally responsible requires multiple strategies from healthcare leaders. An increased volume and scale can help reduce hospitals' risk while offering the best care to the patient (American Hospital Association, 2019). Rural area hospitals are negatively affected by a declining population, lack of revenue, Medicare reimbursements that do not cover costs, and a shortage of physicians. Hospitals look to the federal government for payments. Still, the reimbursement monies do not cover the cost of care provided, and ultimately, the lack of funding can be harmful to rural areas and their access to healthcare (Morse, 2019).

The study results showed decreased operating expenses and expenditures per year when acquisitions occur. Savings are seen when hospitals come together to improve quality and reduce risk (Livingston et al., 2019). This merger strategy is one-way healthcare leaders can make more cost-effective decisions for the organization (American Hospital Association, 2019). This financial savings means more latitude in strategic decision-making to meet the government requirements for providing high-quality care. Innovative strategies are essential for a healthcare organization to remain viable and provide care to the communities it serves (Martinez et al., 2016).

The AHA expressed its position on how the reductions in the OPPS payments would negatively impact hospitals. The AHA believes that the changes do not consider the differences in providing care between a hospital versus an independent physician's office. Hospitals have negative operating margins from treating Medicare patients in hospital outpatient departments. According to the fiscal year 2017 Medicare cost report data, Medicare margins for outpatient services were –14.2% in 2017. Overall, Medicare margins were at a record low of –9.9% in 2017, with a –11% projected for 2019 (American Hospital Association, 2019). These data also show that other outside factors contribute to the growth of OPPS expenditures outside of the hospitals' control (American Hospital Association, 2019).

Outpatient Prospective Payment System

Site-neutral payments have been an area in which CMS has proposed to decrease the differences in reimbursement monies for the same service performed at different locations (Kacik, 2018). In the released final Medicare hospital OPPS for the calendar year 2020, the code (G0463) for clinic visits will reduce payments (Centers for Medicare and Medicaid Services, 2019). The evaluation and management of patients performed in a hospital will be subject to the same reimbursement, whether in a new location under Section 603 of the Bipartisan Budget Act of 2015 or at an excepted site. According to Coons (2019), this reduction in payments will be phased in over two years, saving the Medicare program $380 million in 2019 and $760 million in 2020 (Daly, 2018).

The future policy changes that ultimately cut payments decrease the reimbursement monies that come into a healthcare organization. Precisely, the outpatient

service cuts to the OPPS for hospitals concern hospital advocates. The reduction to the OPPS can lead to a $760 million payment cut for billed outpatient services (Daly, 2018). The policy change was written for the calendar year 2019 by CMS. The OPPS change would reimburse for billed clinic visits performed in a hospital outpatient department with the PFS, which has a 40% of OPPS rate (Daly, 2018; Lithi, 2018).

The updated final policy, payment, and quality provision change to the MPFS for the calendar year 2019 were released, which included reducing the payments that some services are billed under OPPS. A relativity adjustment of prices will reduce the payment given under OPPS by 40% and align the reimbursement with the PFS. This update will allow fairer competition between hospital outpatient facilities and physician offices (Centers for Medicare and Medicaid Services, 2018).

New Jersey Increases in Health Expenditures

A Health Care Cost Institute analysis of New Jersey between 2012 and 2016 showed an increase in outpatient spending. This increase is due to a rise in prices and outpatient services utilization. Nationally, the average outpatient spending went up 17%, and comparatively, in New Jersey, it went up 19% (Schwimmer, 2018). The primary driver of New Jersey health expenditures is increased healthcare costs. Some of the spending upsurges may be associated with innovations, such as new drugs and treatments, but a large part is driven by increased costs for services (Schwimmer, 2018).

A Health Affairs report found that many economic and healthcare factors have impacted state healthcare expenditure growth. The information updated the prior findings published in 2011 that provided data on state spending. The updated study found that the

state with the highest per enrollee Medicare spending in 2014 was New Jersey ($12,614), with spending levels roughly 15% above the national average ($10,986) (Lassman et al., 2017).

Hospital Outpatient Service Utilization

In a study published in *JAMA Internal Medicine*, there was a correlation in ordering outpatient noninvasive cardiac tests in a more expensive testing location (LaPointe, 2019). When Medicare reimbursement depended on the site, greater hospital-based versus practice-based payments were associated with higher proportions of outpatient noninvasive cardiac tests performed in the more expensive setting. The Medicare fee-for-service claims showed that from 2005 to 2015, the number of outpatient tests and payments for exams done in provider-based offices showed an increase in the testing payment ratio from 1.05 to 2.32. (LaPointe, 2019). The movement for these examinations to be performed in more expensive hospital outpatient centers increases costs to the Medicare program.

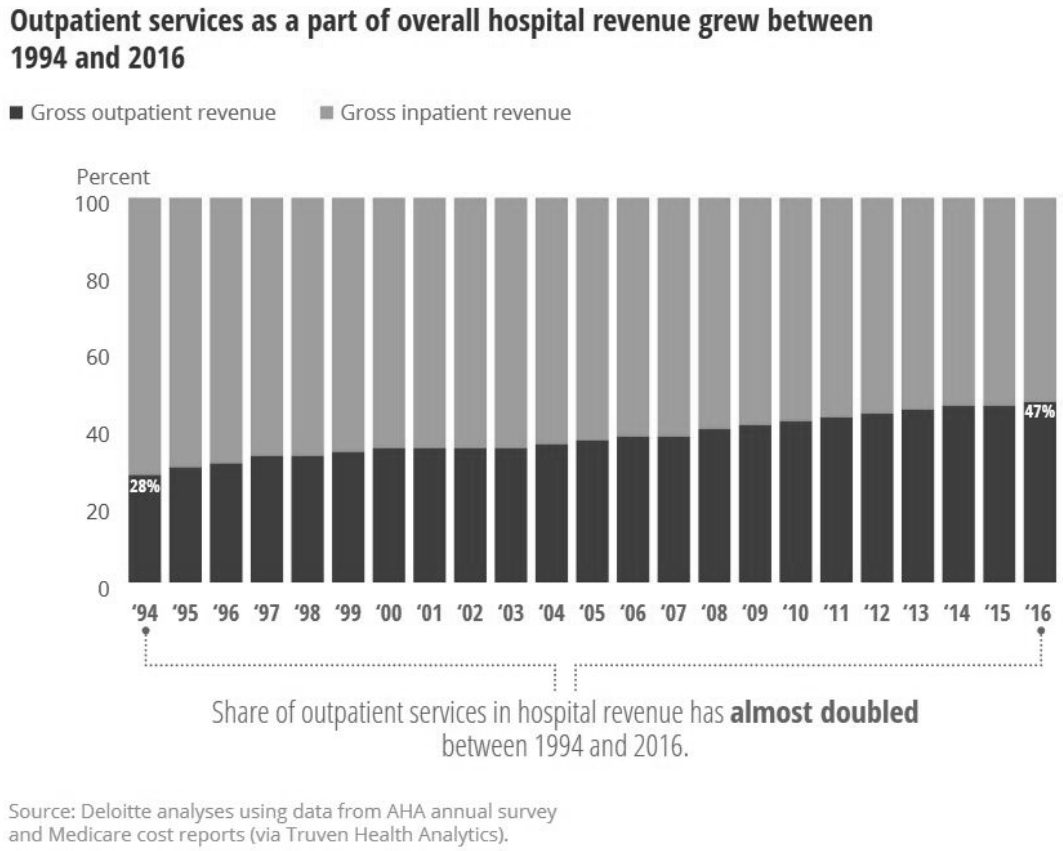
Hospital testing increased by 21.1% in 2008 to 43.2% in 2015. This rise in utilization and cost has CMS proposing changes to reduce the continued increase in reimbursement payments. Site-neutrality payments have been introduced to offer competition and the ability for the patient to choose between various sites for exams without an increase in cost for the same care (Centers for Medicare and Medicaid Services, 2018; LaPointe, 2019; Numerof, 2019).

A study performed by Deloitte Insights (Abrams et al., 2018) evaluated the growth in outpatient care. Overall, outpatient services increased between 1994 and 2016.

According to the Medicare Payment Advisory Commission, outpatient visits and diagnostic imaging exams increased by 47% between 2005 and 2015. The outpatient spending for Medicare went up by 8% each year, from $885 in 2006 to $1,753 in 2015 (Abrams et al., 2018). The Medicare reimbursement fee schedule provides higher payments for physicians who have practices owned by hospitals versus an independent physician for an equal service provided. A MedPAC report revealed that there had been an increase in physician and hospital consolidations between 2012 and 2014. In 2014, Medicare reported that 39% of physicians billed to Medicare were employed by a larger hospital organization (Abrams et al., 2018).

Figure 3

Outpatient Services as part of Overall Hospital Revenue Grew Between 1994 and 2016



Note. From "Outpatient Services as a Part of Overall Hospital Revenue, 1994–2016," https://www2.deloitte.com/us/en/insights/industry/health-care/outpatient-hospital-services-medicare-incentives-value-quality.html

In 2017, in collaboration with Avalere Health, the Physicians Advocacy Institute researched prior studies that discussed the consolidation and acquisition practices of physicians working for hospitals and their impact on Medicare. The shift has been due to market forces that offer financial advantages as one incentive. The report showed that regional and national trends in physician employment and hospital acquisitions have increased. A 129% increase in hospital acquisitions of physician practices has been

reported from 2012 to 2018. This trend has contributed to the rise in outpatient services performed in hospital outpatient centers rather than independent physician settings. This movement has impacted Medicare and the patient financially. The episode-of-care payment is increased when the service is performed in a hospital outpatient center compared with a physician-owned practice. The financial impact was a jump in the financial responsibility for the beneficiaries and Medicare to evaluate the categories of cardiology, orthopedics, and gastroenterology (Avalere Health, 2016).

In 2016, Avalere Health conducted a study that evaluated the payment differentials across outpatient care settings. This analysis included evaluation and management visits across different locations. The Avalere study is done based on the incentives to providers based on the environment in which they provide the services. MedPAC has made reform proposals to equalize reimbursement payments for the same service regardless of where the service was performed. The physician's office payment is based on the PFS described by the HCPCS codes. The literature showed a shift for certain care services from physician offices to hospital outpatient departments. Medicare claims data were reviewed, and the evaluation and management services, which can be done in an office or a hospital outpatient department, were examined to see the differences in payments made (Avalere Health, 2016). The analysis showed that the visits done in a facility owned by a hospital are reimbursed at a higher rate than those done in an independent setting.

Financial challenges cause large healthcare organizations to come together to overcome the hardships they face. The pressures to remain financially viable are causing

strategic initiatives such as mergers and acquisitions. These practices have occurred to help healthcare organizations achieve their goals in recent years. In 2017, there were 115 healthcare mergers and acquisitions, the highest number recorded in recent times (Kaufman Hall, 2017). These mergers cause fear for providers who say that there will be more competition for outpatient services, which will move them away from hospitals and, ultimately, primary care physicians (LaPointe, 2019). This reduction in services performed in a hospital setting may create additional financial challenges for the hospital organization leaders. Partnerships are becoming more innovative, such as Hackensack Meridian Health, New Jersey's most extensive integrated health system, merging with Carrier Clinic to expand the behavioral health services offered to their patients (Kacik, 2019).

Medicare

Medicare is now the most extensive social insurance program in the United States, increasing spending each year (Cubanski et al., 2019). In 2017, Medicare payments were $702 billion, up from $502 billion in 2007 (Chandra & Garthwaite, 2019). This increase is due to the growth in Medicare enrollment caused by the baby boom generation reaching the age of eligibility and increases in per capita healthcare costs (Cubanski et al., 2019). Medicare faces multiple challenges due to increases in cost and the need to provide a quality continuum of care to beneficiaries. Many reform proposals have been introduced to regulate and control costs. In addition to reducing costs, there is a need to increase the societal benefits of the program. Medicare reform initiatives should

be proposed to increase competition and the value of the existing program. This social program can be the catalyst in creating a plan that can benefit the healthcare sector.

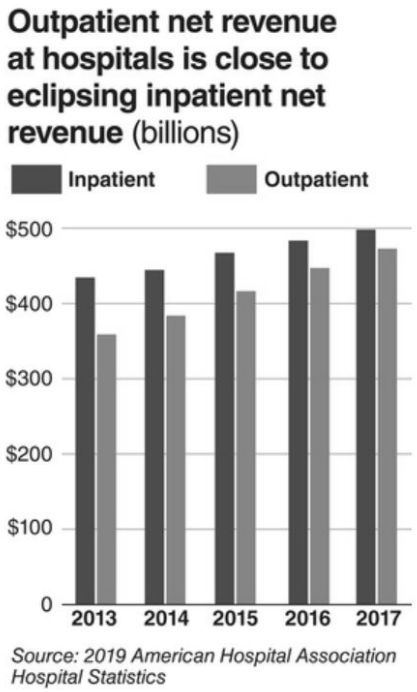
Medicare has been proposing policy changes to decrease the costs of the program. MedPAC was asked to analyze the federal policies that may be contributing to the increase in spending. This spending has been attributed to the rise of hospital consolidations and the purchases of independent physician clinics. In 2018, hospitals billed almost $200 billion for reimbursements (Luthi, 2018). A change in policies is necessary to curb Medicare's spending in reimbursing hospitals. One of the proposals that would save Medicare money is site-neutral payments, which will pay equal monies for a service, whether performed in a hospital outpatient department or at an independent facility (Luthi, 2018).

Outpatient Revenue/Inpatient Revenue

Tara Bannow (2019) referenced the AHA data to present updates in hospital revenues. There has been a shift to performing services in an outpatient hospital facility. According to the AHA's 2019 statistics report, the hospitals' net inpatient revenue in 2017 was $498 billion, while the outpatient revenue came to a close $472 billion. This comparative ratio is 95%, a significant increase from 83% in 2013 (Bannow, 2019). Overall, there is a decrease in the utilization of inpatient services and an increase in outpatient exams performed (Bannow, 2019). The gap is expected to continue to decrease in the coming years.

Figure 4

Outpatient Net Revenue at Hospitals is Close to Eclipsing Inpatient Net Revenue



Note. From "Statistics on outpatient net revenue at hospitals are close to eclipsing inpatient net revenue (billions)," by American Hospital Association Hospital Statistics, 2019.

Literature Summary

The literature showed a need to curb spending in the U.S. healthcare system. Expenditures are increasing each year, putting a financial strain on government programs. This increase in utilization and the gap in reimbursement payments ultimately affect individuals' out-of-pocket healthcare expenses. The CMS proposed decreases for the hospital OPPS to save Medicare about $610 million and Medicare beneficiaries around $150 million (Kacik, 2018).

These cuts put financial pressure on hospital leadership to meet the criteria for full reimbursement while remaining viable as an organization. These pressures strengthen the need to understand the financial impact these cuts will have on the hospitals and increase the demand for innovative tactics to achieve future successes.

Definitions of Key Terms

Centers for Medicare and Medicaid Services (CMS): The federal agency runs the Medicare program. Also, CMS works with the states to run the Medicaid program and ensure that the beneficiaries of these programs can receive high-quality, affordable healthcare (Centers for Medicare and Medicaid Services, 2019).

Exempted Location: A hospital outpatient department applied to begin taking patients before December 2, 2015, and provided proper documentation to CMS. They were exempted from the Bipartisan Act's site-neutral payment provisions (Dyrda, 2017).

Fee Schedule: A complete listing of fees used by Medicare to pay physicians or other providers/suppliers. This comprehensive listing is used to reimburse a physician or other providers on a fee-for-service basis (Centers for Medicare and Medicaid Services, 2019).

Fee-for-Service (FFS): A method in which physicians and other healthcare providers are paid for each service performed. Examples of services include tests and office visits (HealthCare.gov, n.d.).

Healthcare Common Procedural Coding System (HCPCS): A medical code set identifies healthcare procedures, equipment, and supplies for claim submission purposes (Centers for Medicare and Medicaid Services, 2019).

Hospital: An institution primarily engaged in providing, by or under the supervision of physicians, inpatient diagnostic and therapeutic services or rehabilitation services (Centers for Medicare and Medicaid Services, 2019).

Medicaid: A joint federal and state program that helps with medical costs for people with low incomes and limited resources. Medicaid programs vary from state to state, but most healthcare costs are covered for qualified individuals (Centers for Medicare and Medicaid Services, 2019).

Medicare: The federal health insurance program for people 65 years of age or older, certain younger people with disabilities, and people with end-stage renal disease (Centers for Medicare and Medicaid Services, 2019).

Medicare Part A: Hospital insurance pays for inpatient hospital stays, care in a skilled nursing facility, hospice care, and some home healthcare (Centers for Medicare and Medicaid Services, n.d.).

Medicare Part B: Part B helps cover physician services and outpatient care. It also includes some other medical services that Part A does not cover, such as physical and occupational therapists and some home healthcare services. Part B helps pay for these covered services and supplies when medically necessary (Centers for Medicare and Medicaid Services, n.d.).

Medicare Physician Fee Schedule (MPFS): Provider of more than 10,000 physician services, the associated relative value units, a fee schedule status indicator, and various payment policy indicators needed for payment adjustment (Centers for Medicare and Medicaid Services, 2019).

Medicare Payment Advisory Commission (MedPAC): The primary Medicare advisory body to Congress (MedPAC, 2018).

Outpatient Prospective Payment System (OPPS): The method by which Medicare pays for most outpatient services at hospitals or community mental health centers under Medicare Part B (Centers for Medicare and Medicaid Services, 2019).

Outpatient Services: A service typically performed in less than one day (24 hours) at a hospital outpatient department or community mental health center (Centers for Medicare and Medicaid Services, 2019).

On-Campus: The physical area immediately near the providers' main building and located within 250 yards of the facility (Hellow, 2015).

Off-Campus: A provider-based department located more than 250 yards from the leading provider building (Hellow, 2015).

Provider: Any organization, institution, or individual that provides healthcare services to Medicare beneficiaries. Physicians, ambulatory surgical centers, and outpatient clinics are providers of services covered under Medicare Part B (Centers for Medicare and Medicaid Services 2019).

Site Neutrality: Equal reimbursement for services regardless of the location at which it was provided (Centers for Medicare and Medicaid Services, 2019).

Bipartisan Budget Act of 2015: The federal law dictates that off-campus hospital-based facilities that began billing under the OPPS on or after November 2, 2015, would not be paid for most services under this system after January 1, 2017 (Dyrda, 2017).

Section 603 of the Bipartisan Budget Act of 2015: The section of the Bipartisan Budget Act of 2015 that requires that, except for emergency department services, services furnished in off-campus Provider-Based Departments that began billing under the OPPS on or after November 2, 2015 (referred to as "nonexcepted services"), are no longer paid under the OPPS. Instead, these services are covered and paid under "another applicable Part B payment system" (American Hospital Association, 2019, p. 1).

Assumptions

The assumptions of a research study should be identified and discussed in the research study. The modeling assumptions should be thoroughly documented so future researchers can accurately assess the work (Anderson, 2019). The quantitative method is chosen to prove or disprove the hypothesis by using data to use an approach that is scientifically objective and rational (McLeod, 2019).

The quantitative method can have deficiencies that can influence data analysis. Large sample sizes are needed to reduce the inability to generalize the study findings to a broader population set. The misrepresentation of the target population may interfere with the aims and results of the study (Chetty, 2016). The comprehensive statistical analysis can be limited based on the researchers' understanding of the testing models. Quantitative research does not occur in natural settings or allow for information to be further explained due to differences in the possible meaning of the questions (McLeod, 2019). Defining and understanding the shortcomings can help address the needs to minimize them. Overcoming statistical challenges can be done by finding the best sample size for the study and choosing the best tool to analyze the data for accurate results.

One assumption for this research study was that since there is a reduction in reimbursements, there will be a positive correlation with a decline in hospital revenue. The CMS database is assumed to contain accurate data. All hospitals that have outpatient centers and provide clinic visits accurately reported their statistical information to the database. Also, the AHA (2018) stated that this reduction in Medicare OPPS reimbursements would reduce revenue for the hospitals and provide the needed services to the communities they serve.

The analyses used to address the research questions were paired-samples *t*-tests. Additionally, there are three assumptions of the paired-samples *t*-test: there is a continuous dependent variable, the dependent variable is approximately normally distributed, and there are no outliers. If the assumptions were not met, a Wilcoxon test was run.

Assumptions were needed to determine whether hospitals have a financial problem with each year's Medicare policy changes. Using the agency theory helped to evaluate the problem. The theoretical framework also helped provide a realistic conclusion to assist healthcare leaders in making the best future strategic decisions for their organizations. The agency theory model was appropriate because it gave insight into what decisions were made regarding incentives and the problems with compensation contracting (Mitnick, 2006).

Limitations

In research, identifying the limitations, challenges, and potential barriers can help find the means to overcome these factors during the research process. Mentioning these

limitations beyond the researcher's control is essential for the research study (Theofanidis & Fountouki, 2019). Identifying the inherent limitations during the research process was necessary because of the potential impact on the study. One weakness that can affect the interpretation of data is that the meaning of the information can change from one state to another. The Medicare data set may be viewed differently in a rural part of the United States versus a large city and can alter the decisions made by leaders in organizations.

Another limitation of this study was finding adequate retrospective data to assist future studies discussing how CMS reimbursement decreases can negatively impact healthcare organizations. The costs to access needed databases can be a barrier for the researcher. Not having access to pertinent data information due to a financial obstacle can be detrimental to the successful completion of the dissertation study.

A final limitation is the applicability of the results due to the small sample size. It may not be easy to generalize the findings and their applicability to a larger sample. For example, researching data on all the states in the US and how the CMS changes affect particular hospitals throughout the country can assist with making broader interpretations of the data. Limited access to access large datasets will make this difficult to assess.

Scope and Delimitations

Identifying the delimitations creates a foundation for why decisions are made and why a specific research design and theoretical framework were chosen (Theofanidis & Fountouki, 2019). Delimitations are the limitations set by the researcher that define the scope of the study. The researcher establishes the boundaries to have the data work within the constraints imposed for the study (Leedy & Ormrod, 2019). The scope defined

as the parameters set for this research allowed the analysis to remain concentrated on the purpose stated for this study. The constraints defined will create the scope in which the study will be operating (Simon & Goes, 2013). The primary focus is reducing Medicare OPPS reimbursement cuts due to the possible increase in Medicare costs. The data location was limited to the state of New Jersey. The generalizability of the study was limited to OPPS payments billed from hospitals in New Jersey. The data was kept within the limitations set of the study by removing hospital outliers and records not billed under OPPS.

The economic theory of agency, related mainly to the three parties affected by Medicare changes, was applied in researching multiple framework options. The generalizability of the study was limited to New Jersey hospitals that bill under OPPS. All secondary data were extracted from publicly available data sets and analyzed from various organizations without manipulation or interpretation.

Significance of the Study

The results of the financial implications for hospitals within this study may help to promote tactics for hospital executives to continually come up with innovative ways to overcome the OPPS reimbursement cuts that were once expected as revenue. Healthcare leaders must provide ways to increase the revenue stream to justify investments for their departments when reductions in revenue are on the horizon (Mobatuwana et al., 2017). After implementing reimbursement cuts, hospital leadership can use the study to identify a need to improve financial practices. Some recommended changes are reducing overhead costs, cutting down on the use of new medical technologies, and using data to

create a more cost-efficient environment in the organization (Goldsmith & Bajner, 2017). According to Fisher (2015), cutting costs is not an easy strategy for leadership because resources diminish. The need to meet or exceed threshold metrics set for care delivery has increased since the passage of the Affordable Care Act. A limitation of the study was the applicability of the results. Studying all the states in the US and how the CMS changes affect particular hospitals throughout the country can alter the evaluation of the results. The financial impact may differ from hospital to hospital throughout the US and their location within the specific state they operate.

Positive Social Change

Successfully handling all critical operational responsibilities can become challenging for hospital leaders. While various agents have competing goals in delivering care, there is a social responsibility to provide care to all individuals in need while maintaining financial stability (Stephan et al., 2016). Healthcare organizations are now under scrutiny to provide a strategic focus on caring for all individuals in need. According to Stephan et al. (2016), positive social change is "the process of transforming patterns of thought, behavior, social relationships, institutions, and social structure to generate beneficial outcomes for individuals, communities, organizations, society, and the environment beyond the benefits for the instigators of such transformations" (p. 1252). Creating positive social change within a healthcare organization that can improve the resources may enhance the quality of care provided to patients and improve their experience while decreasing costs to the overall health system (Stephan et al., 2016). A study done by the Chartis Group and IVantage Health Analytics showed that 41% of rural

hospitals reported negative operating margins in 2016 (LaPointe, 2017). Rural hospitals serve socioeconomically disadvantaged populations, resulting in worse health outcomes and higher healthcare costs (LaPointe, 2017). The study results can be beneficial in providing financial guidance to hospitals and possibly keeping some operational that may have needed to close. This study's results can assist leaders in positively affecting change for the communities they serve.

Summary

Various policy changes that affect the healthcare sector occur each year. Policy changes can alter the objectives set by hospital leaders in their planning of future goals. Hospitals have been strategically expanding their services beyond the organization to qualify with Medicare, such as providing outpatient testing for care exams done without an overnight stay (Coffta, 2018). Acquiring outpatient facilities allows hospitals to expand their healthcare offerings to a larger geographical area outside of the hospital setting and provide services to communities that may be underserved concerning the care exams needed (Heath, 2018). This strategy also allows the organization to receive the maximum CMS reimbursement under the OPPS fee schedule for offering the hospital outpatient services, which benefits it financially (Coffta, 2018; Coons, 2019).

The increase in healthcare costs in the United States has concerned all parties involved in the healthcare process. Due to the necessity to control spending and reduce the significant reimbursement gap between outpatient and inpatient services, the CMS is implementing cost-containment policies that will affect the hospital outpatient sector (Firth, 2018). Analysis of the data for outpatient service use in New Jersey can assist

leadership in anticipating the financial challenges they face as current, and future Medicare cuts continue to affect their strategic initiatives for the hospital.

Section 1 presented the foundation for the study and the literature review. The literature review shows a gap in the discipline when discussing the OPPS effects on hospitals in New Jersey. The following section will focus on the research design and approach for the research study. Section 2 includes the design justification, setting and sample, instrumentation, data collection and analysis, and threats to validity.

Section 2: Research Design and Data Collection

This study aimed to assess the CMS policy updated in outpatient reimbursement to the OPPS fee schedule and assess services' utilization changes. The results evaluated the financial implications of hospitals' compensation and the impact on future strategic goals. The evaluation of this impact assisted in coming up with strategies for leadership to navigate their health organizations toward future success. These successes can positively impact the hospital and may improve the experience for the patients during the delivery of care.

This study evaluated the hospital outpatient reimbursement methodologies and how leadership perceives the ability to successfully run organizations during CMS's increased reimbursement cuts and policy changes. Section 2 contains the research design and rationale, the methodology, the population and sample, the data analysis plan, the variables, the ethical procedures, and the threats to validity. Reviewing the quantitative secondary data assisted in answering the research questions that were chosen for statistical evaluation of this topic.

Without understanding the proposed policy changes, leaders can be at a disadvantage when developing future organizational strategies. The purpose of this secondary quantitative data study was to explore the economic effects of the newly implemented OPPS fee for reimbursements that are given to hospitals in New Jersey for Medicare services rendered for calendar years 2017–18. The CMS database of outpatient prospective payment data for only the hospitals in the New Jersey data set were used in

this research. This study examined the revenue effects from CMS reimbursements to see whether there is a statistically significant financial impact on the hospitals.

Research Design and Approach

The Statistical Package for the Social Sciences (SPSS) yielded results examining the research study. Due to technological advancements, large amounts of data are collected into databases that can be used to analyze specific data variables. A paired-samples *t*-test was used for analysis to present possible correlations between the dependent and independent variables. The Wilcoxon signed-rank tests were performed where the assumptions of the paired-samples *t*-test were not met. The quantitative analysis permitted testing the hypotheses using a numerical data set to accept or reject the hypotheses. The quantitative approach allowed the analysis of large amounts of information using statistical analysis and hypotheses testing (Creswell & Creswell, 2018).

The design was appropriate to advance knowledge in this discipline because it can provide leaders with information on the financial impacts of the CMS OPPS cuts on hospital revenue. The design assisted in determining whether any trends exist within Medicare for OPPS reimbursement rates associated with financial implications for hospitals. The dependent variables were revenue, hospital inpatient hospital volume, and the number of outpatient procedures billed to Medicare. The variables were compared over the years 2017 and 2018 for New Jersey.

Quantitative secondary data was used for the research study and will be accessible from a database by the CMS. The data was retrieved from the CMS public file Provider Utilization and Payment Data: Outpatient. This outpatient payment public use file offers

information on utilization and payments paid under the Medicare OPPS for 2017–18. The data were retrieved from the CMS public file Provider Utilization and Payment Data: Inpatient. This inpatient payment public use file offers information on utilization and payments paid for 2017 and 2018.

A quantitative, nonexperimental causal-comparative research design was utilized to evaluate whether a relationship exists between the independent variable, years, and the dependent variables outpatient revenue, number of outpatient procedures, and inpatient hospital volume. All dependent variables are continuous.

The CMS has an additional OPPS database. The OPPS Identifiable Data Set provides claim-level data from 2018 hospital outpatient claims updated through June 2019. The database offers diagnosis codes, bill type, outlier payments, and service revenue. One hundred and twenty million claims are paid under the OPPS reimbursement fee schedule (CMS, 2019). Discussion with the CMS research department was a helpful resource for data needs. The American Hospital Association Data and Insights for hospital statistics was also a data source for the study. The database includes information on health system data for hospital volumes, utilization, the economic impact of policy drivers, and the U.S. hospital distribution for each state.

Research Methodology

The appropriate research design was necessary to answer the research questions and test the hypotheses regarding the Medicare changes to the OPPS fee schedule and their financial effect on New Jersey hospitals. For this study, the methodology was quantitative, which was the most suitable choice to answer the research questions. The

quantitative method uses experimental and randomized approaches to acquire data (Burkholder et al., 2016). The quantitative method also allows for statistical analysis and shows whether any relationship exists between chosen variables (Creswell & Creswell, 2018).

This research explored strategies that hospital leaders can use to overcome financial barriers to decreasing reimbursement monies. A quantitative approach was used to evaluate CMS reimbursement cuts. This approach permitted the ability to analyze collected data to determine the financial impacts of hospitals after the move toward site-neutrality reimbursement. A causal-comparative design quantifies data from the target population to help show any variations in OPPS payments in the region applicable to this study.

The gathered numerical data from CMS allowed for assessing the correlation using statistical methods. The study examined the data results to see whether there was a cause-and-effect relationship between the dependent and independent variables identified in the hypotheses. The causal-comparative approach shows whether the independent variables are affected by the dependent variable that is applied (Williams, 2007).

Population

The paired-samples *t*-test was used to compare two population means (Frankfort-Nachmias & Leon-Guerrero, 2018). The test is used to compare the difference in population means for approximately normally distributed samples (Frankfort-Nachmias & Leon-Guerrero, 2018). The research focused on Medicare billing payments from the OPPS fee schedule for the years 2017 and 2018. Evaluating inpatient data may also allow

the discovery of trends in outpatient and inpatient volumes during the years 2017–18. There are 113 hospitals, including specialty hospitals and 72 acute care hospitals, in New Jersey (New Jersey Hospital Association, n.d.). After screening the data, hospitals that do not offer outpatient services were not included in the data evaluation.

Sampling

A request for procedure code–level data was submitted. The study sample consisted of all hospitals billed using the OPPS and reimbursed for OPPS payments for 2017 and 2018. These datasets are available in the Centers for Medicare and Medicare OPPS database. The inclusion criteria were as follows: (a) OPPS reimbursement and (b) inpatient revenue for this group of hospitals. The data may be kept within the limitations set of the study by removing hospital outliers and records not billed under OPPS.

A sample from an adequate pool of participants was needed to establish the statistical validity of the findings. The goal of sampling is to maximize generalizability and minimize sampling error (Burkholder et al., 2016). The analysis yielded results to reject or accept the null hypothesis. Using all of the hospitals in New Jersey that offer outpatient services for data analysis will yield results to reject or accept the hypotheses. The data analysis will use all of the hospitals in New Jersey that bill for outpatient services. Using the available information for hospitals in New Jersey and procedures billed, both inpatient and outpatient, will also be optimal for the sample size.

The G*Power, a power analysis calculator, was used to perform a sample size analysis (Faul et al., 2007). Using the calculator allows finding the smallest sample size appropriate for an 80% effect for this study. Achieving this minimum sample size should

not be a problem using secondary archival data. The alpha level of 0.05 is chosen to evaluate the results of all three research questions. This 0.05 level means that even if the *Z* statistic was due to a sampling error, which makes the null hypothesis correct, a 5% risk of rejecting the hypothesis exists (Frankfort-Nachmias & Leon-Guerrero, 2018). The results for all research questions were interpreted using the 95% confidence interval typically used in the social sciences (Sauro, 2015).

Using the G*Power analysis calculator, all research questions use the paired samples test to determine whether there is a difference between two independent means. The a priori power analysis is chosen, and a two-tailed *t*-test is entered. The effect size chosen is medium at 0.5. An 80% power analysis is run with an allocation ratio of 2. The minimum total sample size for the study is 34.

Data Analysis Plan

The CMS database that encompasses the secondary data set from 2017 to 2018 was used for this study. The secondary data set includes revenue as the unit of analysis and provides data for the dependent and independent variables. The results were used to analyze these variables with the statistical SPSS tool utilized to measure the data by applying a paired-samples *t*-test that will deliver the results. The calculations that result from the paired-samples *t*-test will assist in analyzing the data within SPSS, and interpretation will aid in determining a null or alternative hypothesis. A test for normality assumption will be done, and if needed, a Wilcoxon test will be conducted to analyze results.

The timescale for the research includes two consecutive years of data from 2017 to 2018 to conduct a current study exploring the gap in the literature and current and past findings of Medicare reimbursements for OPPS. The dependent variables—revenue, hospital inpatient hospital volume, and the number of outpatient procedures billed to Medicare—were analyzed with a grouping factors year 2017 and 2018. The location was limited to the state of New Jersey. The secondary data set will be tested against the research study questions presented in Section 1.

RQ1: Is there a statistically significant difference in the revenue for OPPS for the years 2017 and 2018 for the state of New Jersey?

$H_0$1: There is no statistically significant difference in the revenue in the OPPS for the years 2017and 2018.

$H_1$1: There is a statistically significant difference in the revenue for the OPPS for the years 2017 and 2018.

- DV: Outpatient Revenue (scale)
- Groups: Years 2017 and 2018
- Test Statistic: Paired-samples *t*-test

RQ2: Is there a statistically significant difference in inpatient hospital volume between the years 2017 and 2018 for the state of New Jersey?

$H_0$2: There is no statistically significant difference in inpatient hospital volume between the years 2017 and 2018.

$H_1$2: There is a statistically significant difference in inpatient hospital volume between the years 2017 and 2018.

- DV: Inpatient hospital volume (scale)
- Groups: Years 2017 and 2018
- Test Statistic: Paired-samples *t*-test

RQ3: Is there a statistically significant change in the number of outpatient procedures billed to Medicare over the years 2017 and 2018 for the state of New Jersey?

$H_0$3: There is no statistically significant difference in the number and type of outpatient procedures billed to Medicare over the years 2017 and 2018.

$H_1$3: There is a statistically significant difference in the number and type of outpatient procedures billed to Medicare over the years 2017 and 2018.

- DV: Number and type of outpatient procedures billed to Medicare
- Groups: Years 2017 and 2018
- Test Statistic: Paired-samples *t*-test

Dependent Variables

In scientific research, an independent variable and a dependent variable are tested. The independent variables can cause a change in the dependent variable. The dependent variables can be affected and change due to the independent variables. A confounding variable is a factor that can change how the relationship plays out between the dependent and independent variables (U.S. National Library of Medicine, n.d.). Since the confounding variables can influence the research outcomes, many of them should be identified to reduce the amount of bias introduced into the research.

Using numerical data for the variables helped produce analytical and statistical results. The results determined whether any correlation between the dependent and

independent variables is evident. The dependent variables include revenue, hospital inpatient hospital volume, and the number of outpatient procedures billed to Medicare.

Independent Variables

The independent variable is assumed to cause or determine the dependent variable (Babbie, 2017). The independent variable is the grouping of the years 2017 and 2018 in New Jersey. The data on Medicare patients who were seen at a hospital outpatient facility between 2017 and 2018 will be utilized and inpatient revenue from Medicare.

Ethical Procedures

Anticipating ethical issues is essential to mitigating them throughout the research process. Obtaining the necessary permissions will be done to access the deidentified secondary data sets for the quantitative study (Creswell & Creswell, 2018). The Walden Institutional Review Board will review the analysis to ensure ethical processes will be followed. All data for this study was obtained from publicly available data sets with no patient or protected health information.

The CMS collected data are protected and deidentified before releasing the data. Since the data are de-identified, there are no risks that can negatively impact any individual. Additionally, there was no ability to compromise patients' private health information. The data set was downloaded to a personal computer and deleted after evaluating the data. The research did not present any ethical issues for the university, Medicare, the researcher, or the participants.

Threats to Validity

Quality in research is essential to preserve the integrity of the study. The study should have benchmark indicators to show accurate findings. Not meeting these benchmarks makes the findings invalid. Validity ensures the study is free from biases or the limitations of the study design and that actual phenomena demonstrate this, not merely chance relationships (Cuncic & Gans, 2019). The research study can have improved conclusion validity by yielding results with an 80% statistical power value. Conclusive findings may accurately reflect the objective aspect and create trust in the research (Creswell & Creswell, 2018).

Issues of Internal Validity

Internal validity looks at the possibility that one variable caused the change instead of other variables that could create a difference in the outcome. Any explanations that can also be considered causes that affect the result are regarded as threats to the statement (Burkholder et al., 2016). There could be many confounding variables that have not been accounted for and can influence the outcome of the statistical analysis. Reducing the risks for internal validity by adding a control group can help determine what factor caused the change. When studying causal inferences, a control group is not exposed to the independent variable (McLeod, 2019).

A threat to internal validity was the timing of the data collection and references. This need to align with the timeframe for the research study can be a twofold challenge. The first challenge was to consider only literature within five years of the research study.

The second challenge was to have databases with current information that can be utilized for statistical evaluation of the problem.

Issues of External Validity

External validity is also seen with causal inferences in research and how the findings can be generalized to other situations. One threat that exists is called treatment variation. This variation in treatment could be because of human error or the routine consequences of putting a program together. As in internal validity, these threats should be mitigated by identifying and addressing them. One way to do this is by conducting a literature review and building upon prior research (Burkholder et al., 2016). This defined framework can help justify the researched topics that create a foundation for an existing theory. This agency theory framework helps to strengthen the findings of the study. Some threats to external validity include the following:

1. Policy changes that occur each year to the Medicare program can change the outcome of the statistical results from year to year. The many changes made it challenging to evaluate the data due to inconsistencies in how Medicare reimburses for hospital outpatient services from year to year.
2. This policy update was a national change, and the data focus only on the implications of OPPS for the state of New Jersey, although OPPS, in general, can vary from state to state. Analyzing the data was possible due to published databases collecting New Jersey information. The results may not have represented how Medicare reimbursement changes for OPPS affects other states.

3. Features of the sample can be responsible for the effect of the final results of the statistical analysis. This additional influence creates limited generalizability of the findings (Gans & Cuncic, 2019).

Summary

The research and design were presented for this quantitative study. The study used an experimental method to compare the hospital reimbursements received during 2017 and 2018. The agency theory was presented as the theoretical framework for the research. The analysis of data can offer strategies for hospitals after implementing the changes to the OPPS. The variables tested are healthcare costs in New Jersey and the outpatient OPPS payment revenue from the OPPS payment system. Further evaluation of the hospital volume will be shown by the inpatient revenue received during the same period. The data was collected from an archival database maintained by the CMS.

In Section 2, the research design and data collection were presented. The variables were operationalized by introducing the dependent and independent variables. These threats to validity were discussed to identify ways that outside influences can affect the study. The protection of patients' rights was an ethical consideration, and Institutional Review Board approval will be obtained to use the data set.

In Section 3, the findings and analyzed results will be presented. The data collection and secondary data sets will be shown. The results and a summary of the results will be provided. Interpretation of the findings will offer insight into the research topic for this study.

Section 3: Presentation of the Results and Findings

The purpose of this quantitative, nonexperimental causal-comparative research was to evaluate whether outpatient revenue, number of outpatient procedures, and inpatient hospital volume significantly changed from 2017 to 2018. In addition, it explored the financial effects of the implemented OPPS fee for reimbursements given to hospitals in New Jersey for Medicare services rendered for calendar years 2017 and 2018. A secondary data source from the CMS database answered the research questions. The first research question evaluated whether there was a difference in revenue for OPPS payments for 2017 and 2018. The second research question looked at the difference in inpatient hospital volume for the years 2017 and 2018. The third research question examined whether there is a statistically significant difference in the number of outpatient procedures that are billed. Section 3 contains information regarding the data set, statistical analysis, and results and concludes with a summary.

Data Collection of Secondary Data Set

After finalizing the user data agreement, multiple de-identified data sets provided by CMS were used for this analysis. The sources of information included free data sets provided on the CMS website, the Medicare Provider Utilization and Payment Data: Outpatient, and the Medicare Provider Utilization and Payment Data: Inpatient (CMS: Inpatient & Outpatient, 2022). The data from all three data sets included data from 2017 and 2018. The pretest and posttest variables utilized were OPPS data taken from the year 2017 compared to the year 2018. After a data analysis was performed, there was a deviation from the original plan to run a paired-samples *t*-test. The pre and posttests

showed the data were nonparametric. Therefore, a paired-samples Wilcoxon test was performed.

Description of the Data Sets and Descriptive Statistics

The organizations chosen for the study were the hospitals that billed Medicare for OPPS services and inpatient services. CMS collected the data for the years 2017 and 2018. The initial four data sets for Outpatient and Inpatient Charge Data 2017–2018 were preprocessed in MS EXCEL to convert the average charges to the total charges, filtered by New Jersey, and aggregated by providers' identification numbers. The resulting data set included 64 providers measured by their total discharges, number of drugs, total covered charges, total received payments, and total Medicare payments for the inpatient file; and the number of Ambulatory Payment Classifications (APC) types, the total number of APC services, estimated total submitted charges, total Medicare allowed amount, and total Medicare payments for the Outpatient File for the years 2017 and 2018.

The data sample represents the CMS administrative claims for Medicare beneficiaries enrolled in the fee-for-service program for the state of New Jersey. The hospital referral region (HRR) is a geographic unit of analysis based on the facility location zip codes delineated by the Dartmouth Atlas of Health Care to show the different healthcare markets in the United States (CMS, 2020).

The Outpatient Public Use File (PUF) included data on Medicare fee-for-service beneficiaries from the Medicare OPPS providers within 49 of the 50 United States and the District of Columbia. The information provided includes hospitals with an HRR and billing for comprehensive APCs (CMS, 2020). The data sample for this analysis was

limited to New Jersey. The resulting data set included 64 providers, which exceeded the number recommended by a G*Power analysis minimum sample size of 34.

The first analysis performed in IBM-SPSS Statistics version 28.0 was the exploratory data analysis to present the descriptive characteristics of the data set. The second procedure performed in IBM-SPSS Statistics version 28.0 was the evaluation of the assumptions of the paired-samples *t*-test. The third procedure performed in IBM-SPSS Statistics version 28.0 was a comparison of paired-samples characteristics of the variables to answer the research questions. The Wilcoxon signed-rank tests were performed because the assumptions of the paired-samples *t*-test were not met. The results for each hypothesis and a summary conclude this section.

Results

Three separate SPSS analyses were performed to answer the three research questions. A Wilcoxon paired-samples *t*-test was used to answer all three research questions. The paired-samples *t*-test showed the before and after data collections to compare two population means. Three assumptions exist of paired-samples *t*-test: the continuous scale of the dependent variable, an approximately normally distributed dependent variable, and the absence of outliers.

Descriptive Statistics

The summary of the data set displayed the decline in total numbers for inpatient discharges and payments and growth for outpatient services and charges. For the Inpatient data, Medicare payments in New Jersey accounted for 85.1% ($ 2,897,560,398) of total payments received in 2017 ($ 3,406,723,729) and 84.9% ($ 2,849,822,765) in

2018 ($ 3,357,857,052). For the outpatient data, in 2017, 83.2% ($ 508,293,035) of Medicare payments in New Jersey were obtained from the allowed amount ($ 611,076,480), and 83.4% ($ 553,687,162) in 2018 ($ 663,789,070; Table 1).

Table 1

Summarized Characteristics of the Variables

Group	Variable	2017	2018	Difference (Growth/Decline)
Inpatient				
	Total discharges	249,001	238,079	–10,922
	Total covered charges ($)	20,787,093 641	20,387,231 805	–399,861,836
	Total payments ($)	3,406,723,729	3,357,857,052	–48,866,677
	Medicare payments ($)	2,897,560,398	2,849,822,765	–47,737,633
Outpatient				
	Number of APC	1,473	1,493	+20
	Total APC services	151,913	156,138	+4,225
	Total submitted charges ($)	3,868,010,126	4,172,549,124	+304,538,998
	Medicare allowed ($)	611,076,480	663,789,070	+52,712,590
	Medicare payments ($)	508,293,035	553,687,162	+45,394,127

Note. Independent Variable: a group with factors year 2017 and year 2018; Dependent Variables: Inpatient Discharges, Outpatient APC services, Outpatient submitted charges.

An evaluation of the average outpatient submitted charges increased from 2017 to 2018 by $ 4,758,422. The average outpatient submitted charge was $60,437,658 per provider (*SD* = $52,488,157) in 2017 and $65,196,080 (SD = $56,520,572) in 2018. The average number of discharges in 2017 for inpatient data was 3,891 (*SD* = 2,908), and 3,720 (*SD* = 2,883) in 2018, meaning that on average it decreased by 171 units. The average number of outpatient APC services was 2,374 (*SD* = 1.838) in 2017, and 2,440 (*SD* = 1.922) in 2018, meaning that on average it increased by 64 units. (Table 2). Skewness and kurtosis values for a number of variables were outside of the –2 to +2 range, indicating a possible deviation from a normal distribution.

Table 2

Descriptive Statistics

Group	Variable	Mean	*SD*	Skewness	Kurtosis
Inpatient					
	Total discharges 2017	3,891	2,908	1.05	0.32
	Total discharges 2018	3,720	2,883	1.16	0.71
	Total covered charges ($) 2017	324,798 338	267,662 979	1.46	1.77
	Total covered charges ($) 2018	318,550 497	271,612 691	1.55	2.21
	Total payments ($) 2017	53,230,058	48,704,182	1.61	2.43
	Total payments ($) 2018	52,466,516	49,236,786	1.78	3.19
	Total Medicare payments ($) 2017	45,274,381	41,346,474	1.68	2.82
	Total Medicare payments ($) 2018	44,528,481	41,780,652	1.84	3.59
Outpatient					
	Number of APC 2017	23	10	0.07	-0.41
	Number of APC 2018	23	10	0.09	-0.52
	Total APC services 2017	2,374	1,838	1.17	0.77
	Total APC services 2018	2,440	1,922	1.21	0.96
	Total submitted charges ($) 2017	60,437,658	52,488,157	1.55	1.96
	Total submitted charges ($) 2018	65,196,080	56,520,572	1.68	2.63
	Medicare allowed ($) 2017	9,548,070	9,576,600	1.71	2.57
	Medicare allowed ($) 2018	10,371,704	10,351,519	1.74	2.68
	Medicare payments ($) 2017	7,942,079	8,225,585	1.77	2.78
	Medicare payments ($) 2018	8,651,362	8,884,268	1.79	2.85

Note: Skewness and kurtosis, –2 to +2 range. *SD*-standard deviation. Independent Variable: a group with factors year 2017 and year 2018; Dependent Variables: Inpatient Discharges, Outpatient APC services, Outpatient submitted charges.

Assumptions

A normality test was run to check the assumptions of the paired-samples *t*-test and assess the degree of validity of the results. The first assumption test ensured that the variables were measured on a continuous scale such as interval or ratio. Outpatient submitted charges, inpatient discharges, and the number of outpatient procedures were measured on a continuous scale for the 2017 and 2018 time periods.

The second assumption test required the difference in groups of dependent variables to be approximately normally distributed. A Shapiro-Wilk test was performed on the group's differences to test this assumption. The test results indicated that the variables outpatient submitted charges, outpatient number of procedures, and inpatient discharges were not normally distributed. The frequency distributions were asymmetrical and deviated from the normally distributed bell curves (Table 3). Therefore, a Wilcoxon signed-rank test was performed to answer the research questions.

Table 3

Shapiro-Wilk Tests of Normality

Variable	Statistic	*df*	*p*
Difference in outpatient submitted charges	0.805	64	<.001
Difference in inpatient discharges	0.977	64	0.28
Difference in outpatient APC services	0.830	64	<.001

Note. Independent Variable: a group with factors year 2017 and year 2018; Dependent Variables: Inpatient Discharges, Outpatient APC services, Outpatient submitted charges.

The third assumption required the absence of outliers. It was not tested since a Wilcoxon test does not require this assumption. A Wilcoxon signed-rank test requires the observation to be paired and come from the same population. Measurements for each provider were obtained for two consecutive years. The test also requires each pair to be chosen randomly and independently. Each provider belonged to one observation pair only. Finally, the data are measured on at least an interval scale. The variables were measured on a continuous scale.

The results of a Wilcoxon signed-rank test showed that from the sample of 64 providers, 48 hospitals showed a decline in inpatient discharges in 2018 compared to

2017. The majority of providers showed an increase in outpatient services (n = 39) and outpatient submitted charges (n = 52) in 2018 compared to 2017 (Table 4).

Table 4

Ranks Distribution

	n	Mean Rank	Sum of Ranks
Inpatient discharges 2018 to 2017			
Negative ranks	48	36.63	1,758
Positive ranks	16	20.13	322
Outpatient APC services 2018 to 2017			
Negative ranks	25	31.2	780
Positive ranks	39	33.33	1,300
Outpatient submitted charges 2018 to 2017			
Negative ranks	12	26.75	321
Positive ranks	52	33.83	1,759

Note. Independent Variable: a group with factors year 2017 and year 2018; comparison made 2018 with 2017. Dependent Variables: Inpatient Discharges, Outpatient APC services, Outpatient submitted charges.

The results of a Wilcoxon signed-rank test indicated that the differences in ranks were statistically significant for the inpatient and outpatient data (Table 5). The effect size measures the magnitude of the results of a study quantitively (McLeod, 2019). The effect sizes were calculated using the following formula: Effect size = z/square root of N and evaluated according to Cohen's classification of effect sizes: 0.1 (small effect), 0.3 (moderate effect), and 0.5 and above (significant effect; Cohen, 1988).

Inpatient discharges were significantly lower in 2018 compared with 2017 (Wilcoxon T = 322, z = –4.80, p < 0.001), with a large effect size (0.6), indicating a large effect of time on inpatient discharges. Outpatient submitted charges were significantly higher in 2018 than in 2017 (Wilcoxon T = 321, z = –4.81, p < .001), with a large effect

size (0.6), indicating a large effect of time on outpatient charges. The outpatient number of services was significantly higher in 2018 than in 2017 (Wilcoxon $T = 780$, $z = –1.74$, $p = 0.04$), with a small effect size (0.22), indicating a small effect of time on the number of outpatient services. (Table 5).

Table 5

Wilcoxon Signed-Rank Test Results

	Z	Effect Size	*p* (two-tailed)	*p* (one-tailed)
Inpatient discharges 2018 to 2017	–4.80	0.60	<.001	<0.001
Outpatient APC services 2018 to 2017	–1.74	0.22	.08	0.04
Outpatient submitted charges 2018 to 2017	–4.81	0.60	<.001	<0.001

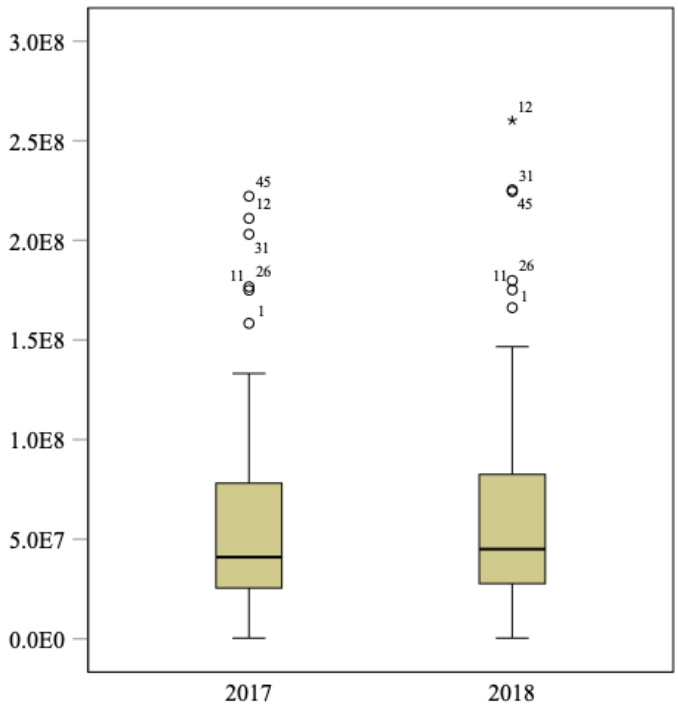
Note: p<.05 for statistical significance. Dependent Variables: Inpatient Discharges, Outpatient APC services, Outpatient submitted charges.

Statistical Analysis Findings

The data were analyzed to address RQ1: To what extent does revenue differ for the OPPS for the years 2017 and 2018 for the state of New Jersey? The null hypothesis states no statistically significant difference in outpatient revenue in 2017 and 2018. The results of a Wilcoxon signed-rank test showed that outpatient revenue was significantly higher in 2018 ($M = 65{,}196{,}080$, $SD = 56{,}520\ 572$) than in 2017 ($M = 60{,}437{,}658$, $SD = 52{,}488{,}157$), Wilcoxon $T = 321$, $z = –4.81$, $p < 0.001$ (Figure 5). The *p*-value was less than .05. The null hypothesis was rejected. The alternative hypothesis was accepted, indicating a statistically significant difference in the revenue for the OPPS for the years 2017 and 2018.

Figure 5

Distribution of Outpatient Revenue

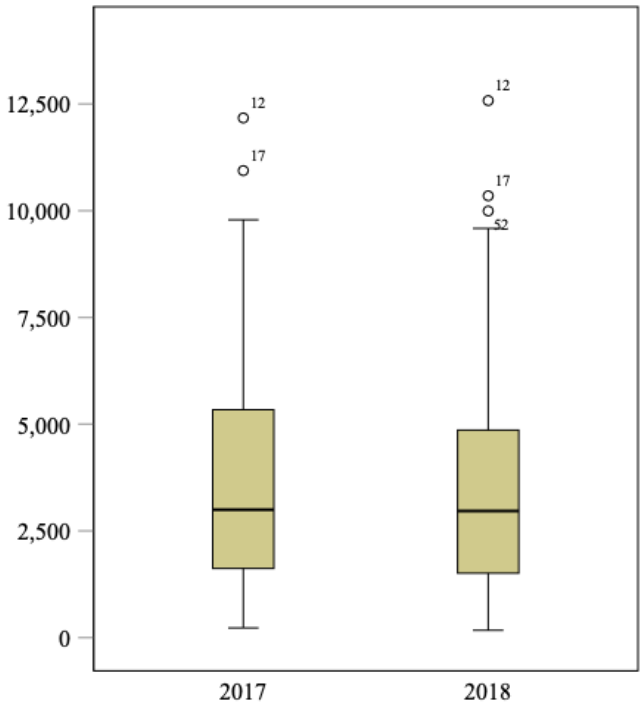


Note: Medicare Provider Utilization and Payment Data: Outpatient.

The data were analyzed to address RQ2: Is there a statistically significant difference in inpatient hospital volume between the years 2017 and 2018 for the state of New Jersey? The null hypothesis states that inpatient hospital volume does not significantly differ by time (2017 vs. 2018). The results of a Wilcoxon signed-rank test showed that the number of inpatient hospital discharges was significantly lower in 2018 (M = 3,720, SD = 2,883) than in 2017 (M = 3,890, SD = 2,908), Wilcoxon T = 322, z = –4.80, $p < 0.001$ (Figure 6). The p-value is less than .05. The null hypothesis was rejected. The alternative hypothesis was accepted, indicating a statistically significant difference between inpatient hospital volume for 2017 and 2018.

Figure 6

Distribution of Inpatient Hospital Volume



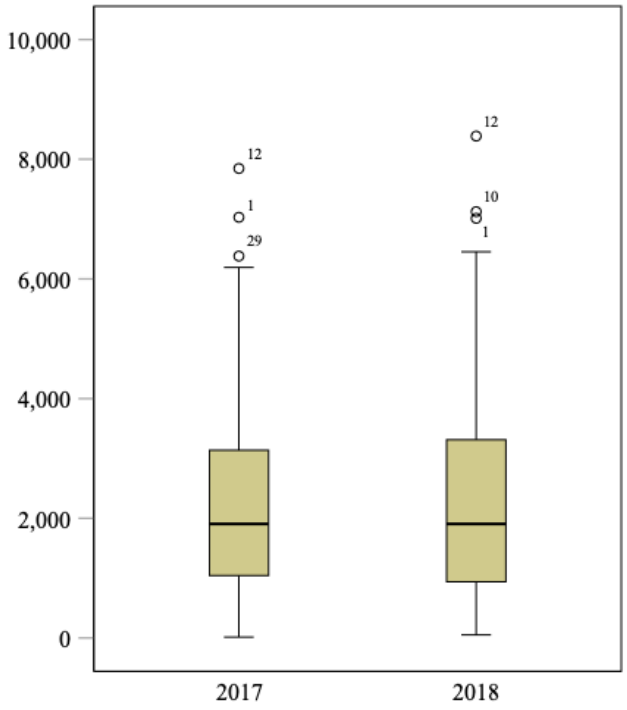
Note: Medicare Provider Utilization and Payment Data: Inpatient.

The data were analyzed to address RQ3: Is there a change in the number and type of outpatient procedures billed to Medicare over the years 2017 and 2018 for the state of New Jersey? The null hypothesis states no statistically significant difference in the number of outpatient procedures billed to Medicare in 2017 and 2018. The results of a one-tailed Wilcoxon test indicated that the number of outpatient procedures was significantly higher in 2018 (M = 2.440, SD = 1.922) than in 2017 (M = 2,374, SD = 1,839), Wilcoxon T = 780, z = –1.74, p = 0.04 (Figure 7). The p-value is less than .05. The null hypothesis was rejected. The alternative hypothesis was accepted, indicating a

difference in the number of outpatient procedures billed to Medicare between 2017 and 2018.

Figure 7

Distribution of the Number of Outpatient Procedures



Note: Medicare Provider Utilization and Payment Data: Outpatient.

Summary

The purpose of this secondary quantitative data study is to explore the economic effects of the newly implemented OPPS fee for reimbursements that are given to hospitals in New Jersey for Medicare services rendered for calendar years 2017 and 2018. The sample consisted of 64 providers measured by their total discharges, total covered charges, total received payments, and total Medicare payments for the Inpatient File; the number of APC types, the total number of APC services, estimated total submitted

charges, total Medicare allowed amount, and total Medicare payments for the Outpatient File for years 2017 and 2018. This study will show the potentially significant increase in the usefulness of the OPPS reimbursement program and approach from 2017 to 2018.

A quantitative, nonexperimental causal-comparative research evaluated whether outpatient revenue, number of outpatient procedures, and inpatient hospital volume significantly changed from 2017 to 2018. The exploratory data analysis was performed to present the descriptive findings of the data set. The differences in the variables of interest displayed a deviation from normality. Therefore, a Wilcoxon signed-rank test was performed to answer the research questions.

This evaluation can help establish whether there will be an additional financial hardship for hospital leaders to overcome. The use of the descriptive analysis was to define the variables and show the measurement results for the research study using quantitative analysis. The results generated generalizable facts that can be used to make future recommendations and provide implications for professional practice and social change.

For the RQ1, the results of a Wilcoxon signed-rank test showed that outpatient revenue was significantly higher in 2018 (M = 65,196,080, SD = 56,520,572) than in 2017 (M = 60,437,658, SD = 52,488,157), Wilcoxon T = 321, z = –4.81, $p < 0.001$. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ1: there is a difference in the revenue for the OPPS for the years 2017 and 2018. For the RQ2, the results of a Wilcoxon signed-rank test showed that the number of inpatient hospital discharges was significantly lower in 2018 (M = 3,720, SD = 2,883) than in 2017 (M =

3,890, *SD* = 2,908), Wilcoxon $T = 322$, $z = -4.80$, $p < 0.001$. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ2: there is a difference between inpatient hospital volume for 2017 and 2018. For the RQ3, the results of a Wilcoxon signed-rank test showed that the number of outpatient procedures was significantly higher in 2018 (*M* = 2,440, *SD* = 1,922) than in 2017 (*M* = 2,374, *SD* = 1,839), Wilcoxon $T = 780$, $z = -1.74$, $p = 0.04$. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ3: there is a difference in the number of outpatient procedures billed to Medicare over the years 2017 and 2018. The assumptions of a Wilcoxon test were met. The next section discusses the study's conclusions and presents recommendations for future research.

The findings' interpretation and the study's limitations are given in Section 4, which shows that the findings offer information to help healthcare administrators make decisions that will allow organizations to thrive while balancing the need for a patient-centered approach to providing care in all health facilities.

Section 4: Application to Professional Practice and Implications for Social Change

In this study, a quantitative approach was employed with a correlational analysis to determine whether a relationship existed between independent and dependent variables to better understand potential impacts of the Medicare changes to the OPPS fee schedule and their financial effect on New Jersey hospitals. This section compares the findings to the literature, draws conclusions and implications, and makes a series of recommendations.

The purpose of this secondary quantitative data study was to explore the financial impacts of the newly implemented OPPS fee for reimbursements that are given to hospitals in New Jersey for Medicare services rendered for calendar years 2017 and 2018. The analysis of this study was to determine whether the CMS reimbursement cuts to the OPPS fee schedule are needed to be made by CMS due to a yearly increase in the OPPS payments to healthcare organizations. The analysis results showed that the null hypothesis was rejected for all three research questions, and the alternate hypothesis was accepted for all three research questions.

Interpretation of Findings

Hospital outpatient centers are no longer exempt from Medicare cuts, reducing the revenue coming into the hospital (Firth, 2018). The literature review conducted showed how these Medicare cuts put financial pressure on hospital leadership to meet the criteria for full reimbursement while remaining viable as an organization. These pressures strengthen the need to understand the financial impact these cuts will have on the

hospitals. The test statistic chosen to answer each research question helped to show whether statistical significance existed for each proposed hypothesis.

For the RQ1, the results of a Wilcoxon signed-rank test showed that outpatient revenue was significantly higher in 2018, with a $p < .001$. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ1: there is a difference in the revenue for the OPPS for the years 2017 and 2018. In RQ1, the coefficients were statistically significant. The findings of this research confirmed and expanded the knowledge of CMS that there is an increase in outpatient spending in New Jersey. This rise in utilization and cost has CMS proposing changes to reduce the continued increase for reimbursement payments. Site-neutrality payments have been introduced to offer competition and the ability for the patient to choose between various sites for exams without an increase in cost for the same care (CMS, 2018; LaPointe, 2019; Numerof, 2019). With the significant increase in costs, these implemented cost containment strategies can help to reduce the cost to the healthcare system.

For the RQ2, the results of a Wilcoxon signed-rank test showed that the number of inpatient hospital discharges was significantly lower in 2018, with a $p < .001$. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ2: there is a difference between inpatient hospital volume for 2017 and 2018. In RQ2, the coefficients were statistically significant. According to hospital financial data for organizations that bill to Medicare, the inpatient payments compared to outpatient payments are declining. Between 2011 and 2018, outpatient revenue grew at an annual rate of 9%. At the same time, inpatient revenue grew by 6%. Outpatient services' total hospital revenue increased

from 28% in 1994 to 48% in 2018 (LaPointe, 2020). The gap between inpatient and outpatient services has narrowed to almost half of the services provided.

In addition, the current literature provides a Health Care Cost Institute analysis of New Jersey between the years 2012 and 2016 that showed an increase in outpatient spending. The data show that for New Jersey, the number of outpatient charges and the number of services billed shows a statistically significant difference from the year 2017 to the year 2018. This increase is due to a rise in prices and outpatient services utilization. Nationally, the average outpatient spending went up 17%, and comparatively, in New Jersey, it went up 19% (Schwimmer, 2018).

For the RQ3, the results of a Wilcoxon signed-rank test showed that the number of outpatient procedures was significantly higher in 2018, with a $p = .04$. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ3: there is a difference in the number of outpatient procedures billed to Medicare over 2017 and 2018. In RQ3, the coefficients were statistically significant. The results of a Wilcoxon signed-rank test for this study showed that the number of inpatient hospital discharges was lower in 2018 than in 2017. In the literature review, Tara Bannow (2019) referenced the AHA data to present updates in hospital revenues. The results show a decrease in the inpatient volume, specifically for New Jersey. There has been a shift to performing services in an outpatient hospital facility. According to the AHA's 2019 statistics report, the hospital's net inpatient revenue in 2017 was $498 billion, while the outpatient revenue came close to $472 billion. This comparative ratio is 95%, a significant increase from 83% in 2013 (Bannow, 2019). Overall, there is a decrease in the utilization of inpatient services and an

increase in outpatient exams performed (Bannow, 2019). The gap is expected to continue to decrease in the coming years.

Each year, Medicare fee schedules are changed based on proposed recommendations. Effective January 1, 2018, CMS removed the Total Knee Arthroscopy (TKA) exam from the Inpatient Only List (IPO). The removal from the IPO list does not mean it must not be done inpatient, but it allows this procedure also to be paid as an outpatient exam (Sconce, 2018). The removal of exams from the procedural inpatient or outpatient lists can shift where specific exams are performed by the organization and can directly impact the reimbursement revenues to the healthcare facility.

The findings support the main themes in Medicare OPPS research and support the theoretical framework. The theoretical framework of this research paper is Stephen Ross's (1973) agency theory. This theory addresses the problems of compensation contracts, and the agency can be seen as an incentive problem. This approach describes a principal-agent relationship in healthcare where the state is involved in the overall regulatory framework on which contracts are based. Forgione et al. (2005) referenced Stanley Baiman to address the contractual relationships between parties that seek to achieve their economic interests as described in the agency theory. These contractual relationships are created among the payer, the provider, and the patient. All parties involved are interested in the outcome of CMS policy changes, which can affect each group individually. Although one party may positively return from proposed changes, others may experience a negative outcome from the recommendations.

The framework has also been characterized by a cycle of increased regulatory involvement, and as the market responds to the regulation, additional regulatory actions are implemented (Tuohy, 2003). The decisions made by contracting individuals can be looked at from the agency theory perspective (Forgione et al., 2005). The results were quantitively analyzed to evaluate the difference in Medicare payments from 2017 and 2018. The interpretation of the findings is a recommendation for policies that can help keep costs down for the U.S. healthcare system and reduce patient payments. The downfall is that the providers and hospital administrators will have to develop effective strategies to compensate for the outpatient implemented reductions faced by CMS.

Limitations of the Study

One limitation of this study that can affect the interpretation of data is that the population studied focuses on the total OPPS claims in New Jersey. These statistical results can mean something different for healthcare organizations from state to state. The meaning and explanation of the information can change from state to state or when looked at on a national level. The data set is limited to only a chosen number of APCs and does not necessarily include all the Medicare outpatient procedures billed from a specified hospital. The data in the Outpatient PUF may not be representative of a hospital's entire population served. The information does not include patients who may be part of other federal programs and not Medicare.

The 2019 data were not available at the current time of this research analysis. This limitation hindered the study of the newly implemented OPPS cuts for the reimbursements of OPPS payments to hospitals that bill through outpatient departments.

The analysis of 2017 compared with the 2018 data shows whether a need exists for CMS to implement policies to contain the increased costs to the healthcare system for OPPS reimbursements.

These data are focused on the state of New Jersey. Since this is a national OPPS change, the data can be interpreted differently throughout the different states. Additionally, the purchased Limited Data Set proved challenging to analyze due to the significant content on the provided flash drive. The need for Statistical Analysis Software for coding and the data download made it challenging to proceed with the running of the information. It was a limitation to executing the study as initially planned.

Another limitation is the additional cuts proposed by CMS and the many additional factors that make up the models for Medicare reimbursements. Each year, CMS proposes changes to address financial challenges and put policies in place that promote a healthcare system that focuses on the patient and the care they receive as a whole.

Another limitation is the additional cuts proposed by CMS and the many additional factors that make up the models for Medicare reimbursements. In July, CMS presented a proposed policy update with a conversion factor decrease of $1.30 during the calendar year 2021. This decrease brings the calendar year 2022 conversion factor to $33.59 (“CMS’s 2022 Medicare PFS, “2021). The decrease is recommended due to the move towards budget neutrality and in addition, proposed because the adjustment for changes in the relative value units and the expiration of the temporary 3.75% payment

increase provided for the Consolidated Appropriations Act 2021 to offset scheduled PFS cuts ("CMS' 2022 Medicare PFS," 2021).

Recommendations

Given what we found in the study, the costs for healthcare reimbursements from CMS outpatient billing codes are on the rise. However, the needed information was not available to evaluate the planned cuts for the 2019 and 2020 calendar years. For example, the data were not updated on the CMS website to utilize the 2019 data after making the changes. The 2019 data for analysis require future research to assess the effectiveness of the CMS program changes to combat the increase of CMS healthcare payments and costs to the U.S. healthcare system. This research is a baseline analysis of pre-program implementation for CMS OPPS changes in 2019 and 2020. Further study is recommended with the 2019 and 2020 data to see any additional financial implications for hospitals in New Jersey. These results show a favorable trend for CMS to reduce healthcare costs and create site neutrality.

The OPPS recommendations for reimbursement are a national OPPS change and can be interpreted differently with a larger sample size and throughout different states and regions. A second recommendation from a macroeconomic standpoint is to analyze a different population and interpret the data results on a national level. The results can give a more accurate account of how the OPPS billing affects the U.S. healthcare system's overall cost.

Additionally, future studies of specific codes on a microeconomic level can assist in identifying whether there is any correlation between the reimbursements received after

passing the updated OPPS ruling for New Jersey. The hospital-owned outpatient centers in 2017, 2018, and 2019 can be compared with the reimbursements brought into the hospitals for outpatient exams performed before the passage of the OPPS changes in 2017. One code that has been significantly billed is the clinic code G0463. The reimbursement cuts to this APC code can negatively affect the hospital organization financially if strategies do not overcome this decrease in revenue. The evaluation of the updated OPPS reimbursement for 2017 and 2018 can help establish whether there will be an additional financial hardship for hospital leaders to overcome.

Implications for Professional Practice and Social Change

CMS has proposed a phase-in of the reimbursement reductions to OPPS moving toward site neutrality over two years to offset the consequences of one total reduction. The hospitals will see a 30% payment reduction in 2019 and a 60% reduction in 2020 for submitted outpatient services rendered (Vernaglia & Shanker, 2018). This loss in revenue for the hospital will challenge administrators who budgeted for the OPPS reimbursement to fund strategic initiatives (Lane et al., 2018).

The HCPCS is one method put forth by Medicare that assigns a number to procedures and services for consistency in processing claims. The problems are the potential negative impact changes to OPPS can have on hospitals after policy changes are implemented, the effect on the organization's viability, and the influence on the delivery of care to the patient. It will be beneficial for hospital leadership to make their recommendations and be transparent with regulatory organizations in how reimbursement cuts can be potentially detrimental to the care they can provide to their patients.

According to Stephan et al. (2016), positive social change is "the process of transforming patterns of thought, behavior, social relationships, institutions, and social structure to generate beneficial outcomes for individuals, communities, organizations, society, and the environment beyond the benefits for the instigators of such transformations" (p. 1252). Creating positive social change within a healthcare organization that can improve the resources may enhance the quality of care provided to patients and improve their experience while decreasing costs to the overall health system (Stephan et al., 2016). There is a need for future healthcare leaders to have information about OPPS specific to hospitals and their off-campus reimbursements. As costs increase, the recommended implementation of policies to reduce reimbursements will affect the possible financial stability of hospital organizations. Leaders can anticipate the reimbursement cuts and develop ways to overcome financial losses while preserving and continuing to provide the quality care every individual expects when it comes to the care and services rendered.

The implications for social change may render a foundation for policy reform by providing studied data to policy decision-makers to amend guidelines for reimbursement rates and to provide strategies for administrators to overcome financial costs. In addition, prepare for multiyear strategies to help navigate the new healthcare landscape of updated reimbursement models. The application of this framework defines CMS, the hospitals, and the patient as having created a relationship to the well-being of a person and the healthcare that is provided and reimbursed for them.

The research study may have implications for social change. It may lead to an even distribution of reimbursements to alleviate medical and financial strain on Medicare patients and their families. Another implication is to make sure that although cost reductions may be inevitable, to ensure appropriate care for all patients, patient-centered care is not diminished. The research can also provide information to hospital administrators to develop strategies for the hospital to continue to provide appropriate care for all patients if reductions significantly impact their hospitals and outpatient centers. According to the agency theory, all parties involved should work together to provide the best care with choices given to patients to be actively involved in where they would like their services rendered.

Conclusion

In this study, a review of the literature showed that Medicare OPPS reimbursement is a necessary implementation by CMS to reduce the costs to the healthcare system. These reductions could impact healthcare organizations throughout the United States. This study set out to fill the gap between the need for Medicare reimbursement cuts and the possible impact on leadership practices and the policies implemented to offset the negative financial implications to the organization.

CMS data sets that contained OPPS and inpatient information that yielded results that showed a difference in outpatient revenue, inpatient discharges, and the number of outpatient procedures showed a statistically significant change from 2017 to 2018. The statistical analysis findings showed evidence to reject the null hypothesis for all three research questions and accept the alternative hypothesis.

The findings of this study provide evidence that implementation of cuts to the Medicare OPPS reimbursement fee schedule is needed to reduce the differences in payments for OPPS versus the MPFS payout. This study also produced information that leaders can use in hospital healthcare environments to offset the negative impacts of the decrease in monies to the organization each year.

The implications for social change may allow for policy reform by providing studied data to policy decision-makers to amend guidelines for reimbursement rates. This understanding by leaders can guide them to develop innovative strategies to overcome financial costs. Ultimately, the goal is to make sure that although cost reductions may be inevitable, to ensure appropriate care for all patients, patient-centered care is not diminished.

Further research using different variables, data sets, and populations can be done in the future to corroborate the results of this study. In addition, analyzing the OPPS data sets once the changes are implemented, and the cuts to reimbursement payments are applied can help analyze the cuts' financial impact. This study can be further strengthened by a follow-up with healthcare leaders who are part of organizations that bill OPPS and collecting their perspectives on how these cuts impact their healthcare facility and, ultimately, their ability to provide the best care to the patients they serve.

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