The Impact of Ambulatory Acquisitions on the Cost of Business Health Insurance

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This study contributes to the literature regarding the increase in acquisition activity and the annual increase in the cost of health insurance premiums for small to middle size businesses. Th research specifically addressed the HCPCS billing rates of procedures before and after acquisition; it examined the annual increase in the percentage of ambulatory physicians compared to the increase percentage in health insurance premiums, and the increase in health insurance premiums was evaluated based on age, type of firm, and size of the firm. The results indicated a statistically significant difference in the billing rates of procedures before and after ambulatory acquisition.

Keywords: acquisitions, healthcare, health insurance

INTRODUCTION

Hospital entities are acquiring ambulatory physician practices (APP) across the country, creating higher cost of care, no significant improvement in quality of care, and less choice for patients (Capps, Dranove, & Ody, 2018; Guerin-Calvert, 2014; Yang, 2014). The impetus for the acquisition activity is the increased governmental regulation adding to the financial burden for ambulatory practices. These regulations continued to increase creating substantial cost accounting increases for these practices (Camilleri, 2018; Cowley, 2004; D'Arrigo, 2019; Guo & Tao, 2015). During this period small and medium-sized businesses saw health insurance premiums increase per annum adding to their fixed cost and decreasing profitability (Chernew, Cutler, & Keenan, 2005; Dauda, 2017). Scholars and those in the healthcare accounting industry hypothesize that the increased regulation led to the acquisition activity, and in turn, created increased costs for insurance carriers, leading to increased annual premiums for businesses (Dauda, 2017; Depew & Bailey, 2015; Himmelstein & Woodhandler, 2016). This study examined the relationship between the regulatory cost increases, increased ambulatory acquisition activity, and the eventual negative increase in fixed cost for small to medium-sized business entities.

Background of the Problem

Between 1985 and 2015, there have been identifiable waves of acquisition activity in the healthcare industry (McCue, 2015). The cause of the first two waves was the direct result of hospital acquisitions of private (ambulatory) physician practices in an attempt to fill hospital beds (McCue, 2015). Many entrepreneurial-minded physicians would fulfill their required contract time at the hospital and then migrate back to private practice to avoid hospital protocols, mandated shift hours, and restrictions placed on them as employees (McCue, Thompson, & Kim, 2015). The third wave of hospital acquisitions was the direct result of governmental changes to the healthcare market; adopting the Patient Protection and Affordable Care Act (ACA) of 2010, introduced a new set of cost drivers for ambulatory practices (Woodlock, 2014).

The uncertainty within the healthcare market, driven by the impact of ACA, has created a myriad of activities all driven by the need to manage cost due to the additional governmental requirements that were enacted (Woodlock, 2014). The ACA impact was far-reaching, the law has tenets that apply to individuals, employers, state governmental agencies, health insurance providers, businesses, and healthcare entities. The push for passage of the ACA was the federal mandate for health insurance coverage for all citizens; the American public rallied behind this ideal without a clear understanding of the economic impact the adoption would create on small and medium size business entities (Dennis, 2016). With rising health insurance costs, studies show that over 41 percent of small businesses have chosen not to hire new employees and over 38 percent have chosen to reduce business growth plans in an effort to maintain health insurance coverage benefits (Lahm, 2014).

According to a National Foundation of Independent Business survey, the rising cost of health insurance has continued to rank as the number one problem for small businesses for thirty years and the impact of ACA has exacerbated the problem (Dennis, 2016). Described as a bill that would focus on the reduction of healthcare costs, research shows that it has created the opposite impact continuing to drive costs for businesses, health insurance carriers, and patients (Lahm, 2014).

Capps et al. (2018) provided evidence of increased acquisitions by hospitals. The study was conducted during the years 2007 and 2013 and used multi-state claims data from multiple insurance carriers. During this time, the percentage of hospital owned ambulatory practices grew to greater than 50 percent. Traditionally, hospitals acquisitions were a mechanism that supported the referral base leading to increased patient counts using their organization. Carlin, Feldman, and Dowd (2016) reviewed the referral patterns associated with the acquisition of ambulatory practices. The study examines inpatient and outpatient diagnostic imaging patterns, providing a longitudinal dataset to determine any changes. In an article by Cuellar and Gertler (2003), the rise of hospital acquisitions serves a role in the assignment of reimbursement rates from Medicare and other insurance carriers. The study revealed that in 1995 less than half of hospitals had an affiliation with other healthcare entities, by 2000 less than 15 percent of hospitals were solo (Cuellar & Gartler, 2003).

The increase in acquisition activity gives rise to the concern of anti-trust issues. Greaney and Ross (2016) discussed the legal issues that surround these acquisitions, mergers, and consolidations. The diminished competition creates less patient choice, it reduces competition thereby increasing overall costs to the insurance carriers and the patient (Greaney & Ross, 2016). The acquisition activity of hospitals has been of interest to the antitrust agencies for many years. The targeted organizations often were located in underserved markets as described by McCue (2015). Further the case mix was a significant reason for the target; the occupancy rate, historically the driver for acquisition, was not a consideration (McCue, 2015).

The impact of acquisition activity results in increased premiums due to the change in billing rates allowed for hospital entities, this increase in the cost of healthcare is passed on to small to medium sized businesses that are not allowed to participate in larger insurance group pools resulting in large premium increases annually (Baker, Baker, & Dworkin, 2018). This increase in fixed costs has a negative impact on operational performance, financial stability, and employee retention and recruitment, leading to a business problem imposed by an outside entity (Capps et al., 2018).

Problem Statement

The general problem addressed was the increased cost of health insurance premiums as a result of acquisitions within the ambulatory healthcare industry resulting in negative premium increases impacting small to medium size business entities.

Capps et al. (2018) discussed the increased activity of healthcare acquisitions and its impact on fees charged for services provided, the increase in billing rates for acquired practices range from three to five times the rate before acquisition activity. This increase dramatically affects insurance carriers' reimbursement rates; no additional services are provided and the patient treatment is rendered at the APP, not the hospital (Camilleri, 2018). Due to the increased overhead associated with providing services in a hospital environment the rates allowable for billing of services is greater, likewise hospital systems are required to bill using HCPCS codes (Baker et al., 2018; Cleverley & Cleverley, 2018).

Current billing rules allow for the ambulatory practice owned by the hospital, to bill at higher rates even when the procedure is performed in the ambulatory practice setting (Howard, David, & Hockenberry, 2017). The hospital system has exploited this billing ambiguity by continuing to purchase ambulatory practices, billing at the hospital outpatient department.

(HOPD) rates, yet the same physician office with the lower cost structure is maintained (McCue, 2015). In cases of not-for-profit hospitals, costs drop when the practice is acquired as property and income taxes are no longer assessed; this drop in property tax impacts the community stakeholders creating a reduction in city, state, and federal taxes, yet the rates billed do not follow the drop in costs rather they are increased to the determent of insurance rates and ultimately premiums paid by businesses and consumers (Reschovsky, 2015). The specific problem addressed was the continual rise of health insurance premiums as a result of acquisitions within the ambulatory healthcare industry within Virginia resulting in negative premium increases impacting small to medium size business entities.

Purpose Statement

This correlational quantitative study aimed to analyze acquisitions within the healthcare industry to determine their impact on the cost of insurance premiums for small to midsize businesses entities. The last 30 years have provided a landscape of acquisition activity within the healthcare industry, there have been three significant waves of activity, much of the first two waves were a direct result of hospital acquisitions of private (ambulatory) physician practices in an attempt to fill beds to drive down fixed costs (Carlin et al., 2016). Physicians that are entrepreneurial-minded would fulfill their required contract time at the hospital and then migrate back into private practice as the protocols, long hours, and restrictions placed on them as employees restrict their ability to practice medicine based on their education, acquired skills, and gut instincts forged from years of patient care experience (Capps et al., 2018).

The most recent wave of acquisitions extends beyond the ambulatory market aiming a multitude of healthcare organizations from pharmaceuticals to skilled care homes (Howard et al., 2017). This impact is compounded as a result of the multiple governmental and legal requirements that have been mandated as a result of the ACA, Health Insurance Portability and Accountability Act (HIPAA), and the American Recovery and

Reinvestment Act (ARRA) to name a few (Camilleri, 2018). The healthcare industry has rarely undergone such a transformative period from a revenue and a cost perspective (Baker et al., 2018).

LITERATURE REVIEW

The researchers sought to identify any gaps within the literature to determine if there were for expansion through the design of this study. The literature review includes the history of legislative changes within the healthcare industry and was examined focusing on the accounting cost for healthcare entities.

The concepts of a maturing market, including business strategic decision making, was considered as part of the cause and effect of the acquisition activity. Further, the impact of acquisition on accounting review and cost for healthcare entities was reviewed. The acquisition cost was examined through the lens of medical procedure and service billing charges which are the determinant factors in health insurance

premiums for small and medium-sized business entities due to their impact on the renewal rates. The increased cost of procedures and services impact businesses negatively as the health insurance premiums paid are insufficient to cover the increased cost of care, leading to increased organizational fixed cost and reduced operational profitability. Finally, a discussion of the variables within the study was discussed.

History of Legislative Changes Impacting the Financial Cost to Ambulatory Practices

The increase in hospital purchases of smaller ambulatory physician practices is said to improve patient care and decrease costs (Capps et al., 2018). The acquisition of small private practices allows the acquiring hospital to bill services at hospital rates, even if all services are performed in the physician office (Cleverley & Cleverley, 2018). The increased rates are allowed under Medicare, and other insurance carriers, as the overhead for a hospital organization requires a much higher reimbursement rate than a physician practice (Baker et al., 2018). Although the patient receives the same test, procedure, or other treatment at the physician office, the amount billed for the same service is at least three times higher (Capps et al., 2018). This is costly to the patient who may be responsible for anything their insurance carrier does not pay if the provider is non-participating, if the patient does not have insurance the entire bill is their responsibility (Cleverley & Cleverley, 2018).

The increase in reimbursement is costly for every party involved. Attention to the disparate rate simply because a hospital group owns a practice has adverse effects for all individuals who are using the healthcare system (Dauda, 2017). The increased costs to the Medicare system, which is already struggling, could devastate the national economy ("Medicare payment differentials," 2016; Himmelstein & Woodhandler, 2016). In addition, the physicians selling their private practice do so with the understanding that they will be allowed to continue to work their own schedules, use their own treatment methods, and earn a much larger guaranteed salary (Guerin-Calvert, 2014). For many small entrepreneurial physicians who have struggled under the weight of private practice this is quite appealing (Howard et al., 2017).

The anticipated results would likely show that many physicians cannot continue to provide personalized care for their patients (Mobley, 1997). Rather hospital designed protocols are mandated, many of which are designed to reduce liability rather than to provide individualized care based on the patient and physician relationship (Reschovsky, 2015). In addition, physicians who do not meet the required quota or earning level per patient may find themselves no longer employed and under a no complete contract that prevents them from returning to their original patient base (Greaney & Ross, 2016).

Research has clearly shown an increase in ambulatory acquisition activity within the healthcare industry resulting in larger hospital-owned organizations that reduce the amount of competition and patient choice. One of the most significant concerns of this acquisition activity considers the increase in cost of care. The increased billing rates allowed by hospital billing codes has raised the rates billed for services provided by acquired ambulatory practices. The increase in billing is passed directly to the insurance carrier and then to the small business through premium increases or directly to the patient. This section provides a review of the project's purpose and addresses the role of the researcher, the data sampling procedures used in the study, the research method and design, data collection techniques and methodology, organization methods, analysis techniques, and the reliability and validity of the data collected.

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The most recent acquisitions extend beyond ambulatory markets, concentrating on varied healthcare organizations from pharmaceuticals to skilled care homes (Howard et al., 2017). This is a result of varied governmental and legal requirements that have been mandated due to the ACA, HIPAA, and the American Recovery and Reinvestment Act (ARRA) (Camilleri, 2018). The healthcare industry has rarely undergone such a transformative period from a revenue and a cost perspective (Baker et al., 2018).

METHODOLOGY

The theoretical framework provides the structure for the research design. It serves as a project plan and will be supported through the research of hospital acquisition activity and the resulting negative increases in health care costs. Creswell (2014) described the quantitative research method as used when studying the relationship among variables. This quantitative study studied the variables of cost increases in health insurance premiums as related to the billing rates variables that occur when a hospital acquires an ambulatory health provider. The study discussed how these changes impact small to medium size business premiums for its employees (Cleverley & Cleverley, 2018).

Linked to the results of the Healthcare Reform Act, many APP sought ways to improve their reduction of income by entering into agreements designed to increase net income and future profitability. The legislation changed the ambulatory market through its increased reporting requirements requiring additional software and employee skills not traditionally found in the ambulatory practice (Howard et al., 2017).

Additionally, the mandated healthcare insurance requirement brought an increased cost of care of these practices, complicating the billing through the introduction of healthcare exchanges due to the ACA (Reschovsky, 2015). In addition, the Health Information Technology for Economic and Clinical Health Act (HITECH) brought additional financial pressure for those who did not adopt technology as there was an increasing penalty placed on Medicare payments for all practices that did not meet the compliance requirements (Capps et al., 2018).

The chosen research design was correlational, as it studies the relationship between variables of increased hospital acquisition and the increase of health insurance premiums. The variables of ambulatory practice acquisition and the associated change in current procedural terminology (CPT) billing rates to HOPD rates serve as the cause for the second variable, health insurance premium increases.

The use of correlational design provides information about variable relationships through sample data and correlational statistical testing (Bloomfield & Fisher, 2019). The inclusion of statistical control includes control variables to test hypotheses or to determine if there is a different explanation for the findings is useful when the control variable inclusion is appropriate and offers validity (Becker et al., 2016). The strength of this method provides the research study the type or degree of relationship between the variables and is, therefore, the appropriate method for the problem studied in this research.

Research Question and Hypotheses

Ambulatory healthcare organizations have traditionally billed insurance carriers and patients for services based on CPT codes billed using HCPCS codes (Cleverley & Cleverly, 2018). These billing codes are three the four times less than the same procedures when billed under HOPD or OOPS rates used by a hospital, Medicare justifies this additional billing rate due to the increased cost of overhead by the hospital (Capps et al., 2018). Acquisition of ambulatory practices by hospital entities has created a situation that allows the hospital to use HOPD rates for billing in spite of the fact that the procedures and providers are still located outside of the hospital setting, the only change in process is the organizational acquisition (Reschovsky, 2015).

This increased billing rates increase costs to insurance carriers that pass these costs to small and medium sized business organizations resulting in premium increases that negatively impact businesses and employees. The quantitative research study focused on the relationship between the acquisition activity within the ambulatory healthcare market and its negative impact on health insurance premiums.

RQ: *What is the difference between billing rates for procedures before acquisitions of ambulatory practices and after acquisition in the state of Virginia?*

The research question is designed to guide the study by creating a statistical model to determine if the acquisition activity impacted the health insurance rates of small and medium business entities. As a result of the acquisition activity of the ambulatory practice, the billing codes that were used changed the rates for HCPCS adding an OPPS fee increasing cost of three to four times their previous rate (Cleverley & Cleverley, 2018). The change of code did not occur due to a change in the procedure process, location of service, or change of provider. It is the result of entity ownership moving from an ambulatory practice ownership to hospital ownership. Simultaneously, the insurance carriers have increased costs to small and medium sized business entities to cover the cash outflow from lack of premiums (Baker et al., 2018).

Hypotheses

$H1_A$: *There is a statistically significant difference between the billing rates before acquisition of APPs in Virginia and the billing rates after acquisition.*

H1o: *There is no statistically significant difference between the billing rates before acquisition of APPs in Virginia and the billing rates after acquisition.*

This hypothesis answered research question one by examining the difference between bill rates before and after acquisition activity of ambulatory practices. By examining the billing rates for the procedure using CPT coding in comparison to the rate that is billed based solely on the change to HCPCS and HOPD billing codes a difference in cost comparison can be evaluated to determine if there is a significant statistical difference because of the acquisition activity. The procedures will continue to be performed in the same location, by the same providers, and using the same medical protocols. The only change is ownership of the entity.

Discussion of Relationships Between Theories and Variables

The independent variable in the study is acquisition activity within the ambulatory market, research of ambulatory practices before hospital acquisition and a comparison of the dependent variables within the same practices after acquisition will be evaluated to determine the impact of the change on rates billed to insurance carriers (Cleverley & Cleverley, 2018). Procedure codes are the instrument used to bill for services performed by physicians, ambulatory practices use CPT codes to bill insurance carriers and patients for services that are provided (Baker et al., 2018). HCPCS are the billing codes used by a hospital entity to bill for services provided for patient care, Medicare allows these billing codes to be as much as four times greater than the rate billed under a CPT code (Camilleri, 2018). The impetus for this increase is the additional overhead cost of a hospital entity. These additional costs are not present outside of the hospital location, yet services rendered in an ambulatory practice setting are billed using HCPCS with HOPD codes after the practice is acquired (Reschovsky, 2015).

The dependent variables, CPT billing rate, HCPCS and HOPD billing rates, depend on the entity ownership allowing for a study of procedure billing rates before and after the acquisition of ambulatory practices (Reschovsky, 2015). The study of these dependent variables allowed the researcher to test hypothesis one to determine how the change in ownership impacts the rates billed for medical services. The ambulatory practice continues to operate using the same tangible assets and human capital, the only change made is ownership and because of this change the charge for the procedures are billed under a different code system increasing the charges without any increased cost (Capps et al., 2018).

The negative impact on health insurance rates was studied by reviewing the cost of health insurance before the acquisition of ambulatory practices and increased billing rates (Cleverley & Cleverley, 2018). These dependent variables show cause-and-effect to determine if the acquisition activity has increased health insurance costs for small and medium-sized businesses due to the change from CPT procedure codes

to HCPCS/HOPD procedure codes (Dauda, 2017). With health insurance costs rising steadily before the ratification of ACA exceeding GDP growth, inflation, and wage increases, the additional cost accompanying ambulatory acquisitions has created an even larger cost increase for small to medium size entities (Guo & Tao, 2015).

Participants

This study did not use source participants due to the research method and design chosen. The use of archival data and available public data sources provided the basis for examining the research questions and the hypotheses. The American Medical Association was a main source of public information providing the data for analysis of healthcare billing rates allowed under Medicare. Further, publicly available data provided by the SCC, the National Conference of State Legislators, and the National Association of Insurance Commissioners regarding increases in insurance rates for small and medium size business entities was also used to retrieve rate comparisons, background information, and other materials to validate data as needed. Finally, an analysis of acquisitions activity was reviewed using Becker Hospital Review and other third-party sources such as Deloitte to include the number of acquisitions. The data used in this research study contains no personal, sensitive, classified, or confidential information as they were all obtained through the use of third-party public information.

Assumptions, Limitations, Delimitations

The importance of researcher assumptions and biases are stated to provide clarity, likewise the limitations and delimitations are clearly identified to provide context and clarity for reader interpretation (Creswell, 2014).

Assumptions

The study utilized data collected from the Centers for Medicare procedural billing rates for CPT codes and HCPCS codes performed under HOPD for zip codes in Virginia. The cost of these procedures provides the researcher with data that can be utilized to determine the accounting cost of a change in billing methodology. An assumption was made that this change increases the revenue of hospital entities with no accompanying increase in expenses directly relating to the cost of the medical procedures and services that were performed prior to acquisition. This assumption is based on the procedure being performed by the same physician, at the same location, and with the same personnel that would have been used before the acquisition. To mitigate the risk of changes in location, physician, or personnel, an analysis was conducted on practices acquired by a hospital entity within the central Virginia area to determine if the assumption was correct for extrapolation to the state of Virginia. The study analyzed third-party data from state and regional insurance carriers to determine the annual cost of insurance claims for small and medium-sized entities over the last five years to determine if the percentage of cost increases for health insurance premiums have increased during the period of acquisition activity.

Limitations

One limitation of the study is the conclusions drawn based on the utilization of data from 2012 - 2016. Although this data identified results during that period, it does not consider current legislative or regulatory considerations that may be currently under review. It is important to consider the impact of governmental and legal changes as part of an organizational PESTLE analysis, which may be considered based on the increases in financial cost to Medicare because of the change in medical billing rates (David & David, 2017). If there is current legislation under consideration to disallow medical procedures and services performed outside of a hospital setting to utilize the HOPD billing rates, the facts of this study would not specifically be negated.

Another limitation of the study is the geographic restriction focusing on the state of Virginia. The use of Medicare standard billing rates would make the study feasible for other states; however, the cost of medical procedures would vary based on geographic changes. The study may not be generalizable as other states may change the location of services or other factors, thereby changing the cost of services provided.

Delimitations

This study focused on the acquisition activity of hospital entities located in Virginia and the resulting impact on the cost of health insurance premiums for the small and medium sized businesses located within this state. Other cost increases were not included in this study as it was designed to examine the impact of changes solely due to the change in billing rates caused by acquisition. The conclusions from the study apply only to the acquisition activity and health insurance increases within the state of Virginia.

Significance of the Study

The increase of ambulatory physician practice acquisitions has created significant increases in billing rates for medical procedures, these increases impact insurance carriers, governmental programs such as Medicare and Medicaid (Camilleri, 2018), and patient out-of-pocket cost due to the change of billing code methodology (Capps et al., 2018). The impetus of ACA was cost reduction in healthcare spending; however, the increased cost of regulation created operational issues for ambulatory practices leading to a reduction in practice profitability and an opportunity for hospitals to aggressively pursue ambulatory acquisitions (Reschovsky, 2015). Additionally, the cost of medical procedures increased solely due to a change in the codification system used to bill for services provided creating a greater cost to insurance carriers and ultimately to businesses providing healthcare insurance to employees (Guo & Tao, 2015). The increase in health insurance rates for small to medium sized businesses continues to rise, often with a double-digit annual increase, reducing the operating profit and creating a wider gap between the amounts of coverage benefit offered to employees (Lahm, 2014).

Reduction of Gaps

The researcher designed this study to provide information regarding the increasing cost of healthcare and its impact on smaller organizations that cannot benefit from spreading the cost of insurance claims filed over a broader employee base. The impact of ambulatory practice acquisitions has increased the cost of care for medical procedures. This increase cost in care is creating a significant fixed cost increase for the eighty percent of small to medium size business owners throughout the United Stated (Lahm, 2014).

Research has been conducted on the rising cost of health insurance premiums and Depew and Bailey (2015) concluded there were three distinct possibilities that exist as a result of increases to the cost of insurance. The first conclusion states that a business entity may absorb the premium increase each year and pass none of the cost to the employee. The second conclusion considered the possibility that employees would share in the increase through an increased portion of the premium cost being borne by the employee. The final conclusion indicates that businesses pass the cost of the healthcare increases to the employees through a reduced increase in wages (Depew & Bailey, 2015). Additional studies point to insurance premium increases as a driving force behind the reduction in coverage for many employees. As employers pass the cost of higher premiums to employees the number of covered workers drops as many are unable to sustain a reduction in wages (Chernew et al., 2005).

Further research conducted by Kirkwood (2016) and Himmelstein and Woolhandler (2016) showed that the United States leads the world in cost of healthcare by approximately double that of other countries. The cost of this care is further amplified by the increased cost associated with ambulatory acquisitions, a report by a UC Berkeley health-policy expert indicates that the acquisition impact is adding additional costs to patient care in stark contrast to the anticipated coordination of care mandate that is part of the ACA (Yang, 2014). The anticipated benefit of accountable care organizations (ACO) has not created a system of improved care. In fact, the study shows that smaller traditional fee-for-service practices were better able to manage the patient care offering a higher quality and a reduced cost with better patient care (McCue, 2015).

The relationship between healthcare providers, insurers, and hospitals continues to drive up the cost of care with little to no regard for quality of patient care as each entity battles to achieve their individualistic objectives with little regard for cost containment (Camilleri, 2018). The increased acquisition activity by hospitals serves as an example of the battle for control as the billing of procedures increases through the use of a facility fee. Ironically, the ambulatory physician practice still operates in the same location, using the same equipment, and with the same staff yet the procedure cost skyrockets (Capps et al., 2018). Fifer

(2016) cited an example of an electrocardiogram showing a rise in cost from $375 before acquisition to over $1,400 after acquisition, yet nothing about the patient care or service provided changes. This increase is passed to the insurance carrier and then to the employer or patient when renewing health insurance contracts.

The study was designed to examine the impact of increased ambulatory acquisition activity to determine if the changes in reimbursement rates have an effect on the cost of care. Further, the study was designed to help determine whether the impact of the change in billing code and therefore reimbursement has significantly impacted the cost of care, resulting in a negative impact on the stated intent of the ACA. Finally, the study was designed to help determine if the increased activity drives the continual increase in health insurance premiums that plague small and medium-sized business entities, resulting in higher fixed costs, lower operational profit, and less economic resources for organizational growth.

Relationship to Field of Study

This quantitative study aimed to analyze acquisitions within the healthcare industry to determine their impact on the accounting cost of health insurance premiums. The increasing fixed cost creates an impact on operational profit and makes accounting and budgeting for these cost increases difficult due to the unpredictable nature of health insurance premium increases. The cost of employee benefits continues to rise, creating a greater decrease in operational profit and impacting the financial stability for small and medium sized businesses. As greater mandated government regulations were introduced into the ambulatory practice market, the cost accounting impact continued to increase, forcing practices to consider selling or experience smaller margins and mounting regulatory requirements (Cleverley & Cleverley, 2018). The budgetary process and cost containment efforts of small to medium-sized business entities continue to encounter challenges in controlling costs due to the increased health insurance premiums that have resulted from the changes within the industry. These additional costs have negatively impacted on the entities, causing a loss of profit as a result of the increased costs.

The importance of this study is on the outcome of the accounting cost changes for the health insurance provider and the patient that impact the accounting based revenue stream or the out-of-pocket cost by the patient. These changes in cost impact the financial stability of the small business and have cost accounting consequences within these business entities. Confronted with rising fixed costs, many entities had to reduce employee benefit plans, reduce the amount of coverage paid by the entities on behalf of the employee, or eliminate health care benefits creating recruitment and employee engagement problems for the entities (Rees, Alfes, & Gatenby, 2013).

The importance of cost analysis, resource allocation, and human capital retention are all critical factors to the operational performance of a business entity. The impact of rising health insurance premiums places an additional fixed cost on the small to medium sized business reducing financial profitability (Blocher et al., 2019). In addition, the possible reduction of benefits creates a barrier for employee recruitment as larger organizations can provide better benefit packages because of their ability to keep health insurance premiums stable due to their large employee base as the accounting cost of claims is spread over many rather than a few (Mihaylova, Dimitrov, Gradinarova, & Todorova, 2018). The loss of the most talented employees to larger firms places a greater disadvantage on smaller businesses that may lead to a reduction or loss of competitive advantage. This creates additional negative financial performance and may lead to fewer options for the consumer as businesses attempt to consolidate creating greater accounting cost issues, as is evidenced by the acquisition of ambulatory practices (Greaney & Ross, 2016).

Research Method and Design

The research method and design chosen address the research questions and hypotheses in the most scientific and objective manner. The archival data used in the study were obtained from publicly available sources and provided the data needed to determine if statistical significance existed. A discussion of the research method and design is provided in the next paragraphs.

Discussion of Method

A quantitative research method is appropriate when seeking to use a scientific and systematic approach to analyze data removing personal objectivity through the use of the fixed design (Yin, 2018). A quantitative research study provides for the use of data from multiple sources allowing for comparison in search of an explanation of the research question(s) through scientific analysis (Creswell, 2014). The quantitative approach will provide a method to study the independent and dependent variables of ambulatory acquisition activity and its impact on the rates used to bill insurance companies and patients using statistics to predict or explain the cause-and-effect of the subjects' activity (Robson & McCartan, 2016).

Discussion of Design

A correlational research design was selected as appropriate as it provides a methodical and scientific approach to studying the relationship between the variables (Yin, 2018). This applied doctoral research study seeks to examine if there is such a relationship between the acquisition of ambulatory healthcare practices and the continued rise in health insurance costs. The correlational research design examines variables seeking to determine the relationships, similarities and differences that impact the outcome or result (Schenker & Rumrill, 2004).

The archival data of acquisition of ambulatory physician practices by hospital entities within the state of Virginia were extracted from Becker, and other reputable sources used by the healthcare industry; further, the number of acquisitions by year was included in the data extraction to provide grouping analysis. The billing rates before and after acquisition activity were evaluated to determine if there was a statistically significant difference between the billing rates for services provided. Health insurance rates were examined to determine the statistical difference between years. The data were then compared to the changes in billing rates to test for cause-and-effect between the studied variables.

Population and Sampling

This correlational fixed design study is intended to provide a representative sample of physicians in the United States. This meets the standard for research as described by Robson and McCartan (2016). A purposive sample method was used in the study, it allows for the judgement of the researcher to be used to achieve a particular purpose to satisfy the needs of the study (Robson & McCartan, 2016). This research study includes two population groups.

The first population is the number of physicians in the U.S. This population was divided into two groups: the percentage of physicians employed in ambulatory practice and percentage of physicians employed by a hospital. The second population in the study was the percent change in health insurance rates and the percent increase in physicians employed by the hospital during the years of 2012 – 2019.

Discussion of Population

The first population group comprises the entire population of physicians employed in Virginia. This population is divided into two groups, physicians employed in ambulatory practice and the number of physicians employed by a hospital. The change per annum of the population size of each group is calculated in percentage form to evaluate the difference between the years of 2012 – 2019.

The second population group included the percentage of increases in health insurance rates by year and the percentage of increases of hospital-employed physicians. The population includes the entire table for each group by year, beginning in 2012 through 2019.

This correlational fixed design study is described as a standard of research methodology by Robson and McCartan (2016). This sampling method's intent allows the researcher to use judgment to achieve a purpose as described in the purposive sampling method (Robson & McCartan, 2016). The sample is built to provide the researcher with data that will be used to satisfy the needs of this research study utilizing an objective and methodical approach to analysis (Robson & McCartan, 2016). The first population for this study was determined by reviewing the total population of physicians and then a sample based on state of residence, Virginia, was selected. The second population included the increases in insurance rates and the increase in physicians employed by the hospital. Further, the sample was taken per annum beginning in

2012 through 2019. The sample size for the two population groups are independent, scale variables and are used to evaluate the research questions for purposes of this study (Morgan et al., 2013).

Discussion of Sampling

Based on a population of 1,005,295 physicians in the U.S., the sample size is reduced to include only active physicians working in Virginia (Kaiser Family Foundation, 2020). The number of physicians working in Virginia is 23,307. The sample must be large enough to provide confidence that the sample is representative of the population (Robson & McCartan, 2016). Using a confidence interval of +5 with a 95 percent confidence level indicates that a sample size of n = 378 should be used for this correlational design (Robson & McCartan, 2016). For this research study the entire sample of 22,873 were included in the study exceeding the statistical requirements (Morgan et al., 2013). The second sample included the entire table, by year, of the increases in health insurance rates and the increases in the number of physicians employed by the hospital also exceeding the statistical requirements of a sample size (Morgan et al., 2013).

Further, this study utilized a paired samples t-test to compare the billing rates charged by ambulatory physicians with those billed by hospital physicians. This comparison used the Medicare standard fee schedule based on HCPCS codes for each group studied as is recommended for a paired samples t-test. Using this test provides the researcher with the means for the two groups of physicians, further it provides a statistical measurement of the correlation (Morgan et al., 2013). The change in health insurance rates were compared to the change in the percentage of physicians employed by the hospital to determine if there is a correlation between the changes that is impacting health insurance rates as described in the first research question.

The sample was selected from the 2012 - 2019 Medicare HCPCS billing codes and included professional and technical component fees. The HCPCS codes used were the 1,054 codes that contained a dollar value rate for the OPPS charges, all other HCPCS codes have a standard dollar value added, which exceeds the 384 records required by statistical methodology (Morgan et al., 2013). The associated Hospital Outpatient Prospective Payment System (OPPS) fee is added to the professional component fee to determine the billing rate for ambulatory practices that the hospital acquired. The relative value unit for all other HCPCS codes is multiplied by the conversion factor of $35.9335 to determine the additional dollars billed by hospital physicians. The ambulatory private practice rate will be used as a comparison to the rates allowed after acquisition by a hospital system to determine the mean by physician type and the comparison of rate differential by year.

Data Collection

Data were collected as required to analyze the research questions and hypotheses following standard quantitative study procedures (Robson & McCartan, 2016). The discussion below identifies the data instruments, collection methods, and organization techniques that were used in the study. A summary of this process is provided to offer clarity of the collection methodology.

Instruments

No specific data-gathering techniques or instruments were used in this study. The study examined historical data based on the number of physicians in Virginia grouped into physicians working for ambulatory private practice and those working for a hospital. The Medicare allowable billing rates, as defined by HCPCS and OPPS codes, were evaluated annually from 2012 - 2019 and were compiled using Microsoft Excel and collected from the publicly available Medicare website. The data are an independent variable and is scale by definition.

The percentage increase, per annum, in insurance rates for businesses located in Virginia is a dependent variable. The percentage increase in the number of physicians that the hospital employed is an independent variable also scale by definition. The variables are defined as scale because they are an annual percentage that has a normal distribution (Morgan et al., 2013). The average annual percentage increase in insurance rates for businesses located in Virginia were evaluated based on the size of the business and used as a mitigating variable for the research study. The gender of the insured, the age groups or age bands of the

insurance policies, and/or the classification individual or family coverage were collected using third-party insurance statistics. All mitigating variables were scale and contained ordered levels with an approximately normal distribution as described by Morgan et al. (2013). The third-party archival sources included, but were not limited to, Medicare 2019 billing rates, Kaiser Family Foundation, Statistica, the National Foundation of Independent Business, and the National Association of Insurance Commissioners. Data gathered were stored in Microsoft.

Data Collection Techniques

Data included in this study were gathered from publicly available third-party sources thought the use of Microsoft Excel and were downloaded from archival data stored online from the Centers for Medicare Services, American Association of Professional Coders, National Foundation of Independent Business, Statistica, Becker Hospital Review, the National Association of Insurance Commissioners, and other publicly available sources. The number of physicians by group, historical billing rates for the physician groups, and health insurance rates by business entity size were studied from 2012 to 2019 and are listed in the accompanying appendices. Microsoft Excel was used to store the data and cross references and filters were applied as needed for data validation. No survey or interview questions were utilized in the data collection techniques for this study.

Data Organization Techniques

Microsoft Excel spreadsheet tables were used to collect the data used in this research study. Research notes were recorded in Adobe and Microsoft Word to maintain consistency and provide a progression throughout the study. The data were stored on the researcher's laptop as well as on flash drives and One Drive that the researcher kept to prevent data loss.

Population and Sample Organization

Microsoft Excel spreadsheets were used as the primary organization tool for the detailed HCPCS billing rates, OPPS billable rates, and other associated data. An unfiltered list of HCPCS codes were downloaded into Excel from the Medicare 2012 - 2019 physician fee schedule for the state of Virginia. The raw data file included all billing modifiers, including professional fees and technical components. The final sample of HCPCS codes with the associated OPPS fees included were stored in Excel with key descriptors included.

The number of active physicians in the U.S. were stored in an Excel file, this file includes a listing of physicians located in each state. In addition, the percentage of physicians employed by an ambulatory practice and the percentage employed by the hospital were stored in an Excel file based on the years of 2012 - 2019. The percentage increase in health insurance rates for business entities was stored in Excel for 2012 - 2019.

Mitigating Variables

The percentage increase in health insurance rates and the percentage increase in physicians employed by the hospital were stored in Microsoft Excel. The annual increases for business entities were collected in a separate spreadsheet. A small business was defined as having 1 to 100 employees, a medium business had 101 - 500 employees, and a large business had more than 500 employees. The Small Business Administration (SBA) defines a small business based on employee counts that are industry specific (McIntyre, 2020). The insurance rates were also evaluated based on individual rate or family rate, gender, and age bands to determine if there is a correlation when the mitigating variables are included in the analysis of the increasing insurance rates and the increasing percentage of physicians employed by the hospital.

Data Analysis

This research study required data to be grouped by percentage of ambulatory physicians and percentage of hospital employed physicians; both groups are independent variables for purposes of this research study. The billing rates for services provided vary depending on the physician's employment status (Cleverley &

Cleverley, 2018). A paired samples t-test was used based on the billing rates used by each physician group; the billing rate used is a study's dependent variable as defined by Morgan et al. (2013).

The percent increase in health insurance rates is a dependent variable and is a numeric measurement of change between the years of 2012 - 2019 (Morgan et al., 2013). The independent variable used in the t-test is the percentage increase in physicians employed by the hospital. The research question sought to identify a relationship between the increase in health insurance rates and the increase in hospital acquisitions. An increasing percentage of physicians that the hospital employs and a decreasing percentage of physicians in ambulatory practice indicate that the acquisition activity is increasing (Reschovsky, 2015). Health insurance rates increase based on the payments made for healthcare and the size of the health insurance pooled dollars and when the cost of care increases, it directly impacts the cost of health insurance rates (Dauda, 2017).

Descriptive statistics were run to evaluate the data for all variables. These statistics will be used to compute the mean, minimum, and maximum values and allow the researcher to check for errors within the data set and to identify any problems that may be present (Morgan et al., 2013). The descriptive statistics allow the researcher to determine if there are any missing data fields within each of the variables and the test provides a numerical value for the number of missing data to ensure that the integrity of the sample size is met (Morgan et al., 2013). When evaluating the variables, the output of the statistics test will reveal any topic irrelevant to the study, allowing the research to exclude erroneous descriptive statistics (Morgan et al., 2013).

The frequency distribution illustrates the number of times that the numeric value occurs, when scores are close to the middle of the range with a small number to either side, a normal distribution is said to occur (Morgan et al., 2013). Each variable requires a measurement level so that each variable's meaning is clearly understood. The variables in this study are scale, known by the traditional term of interval or ratio and allowing for at least five ordered levels that have an approximately normal frequency distribution (Morgan et al., 2013).

The research questions and hypotheses applicable to the study examined the changes in amounts billed for medical procedures and services based on two groups of physicians: those working for ambulatory practices and those employed by the hospital. To test the hypotheses, the rates billed for procedures, professional fees, and services were examined before ambulatory practice acquisition and compared with billing rates after acquisition. The discussion below discusses the variables used in the study accompanied by a detailed description of the dependent variables and the statistical tests used to test and study the hypotheses.

Study Variables

Table 1 provides the variable classification and their relevance to this study.

TABLE 1
VARIABLE CLASSIFICATION

Variable	Classification	Type
Percentage of hospital physicians	Independent	
Percentage of ambulatory physicians	Independent	
HCPCS billing code	Independent	
Percent change in health insurance rates	Dependent	Scale
OPPS fee	Dependent	Scale
Size of business entity	Moderating	Scale
Type of insurance coverage	Moderating	Scale
Ownership of Firm	Moderating	Scale
Age band for insurance	Moderating	Scale

Hypotheses

The first null hypothesis states there is no statistically significant difference between the billing rates before acquisition of ambulatory medical practices in Virginia, an independent variable, and the rates after acquisition, a dependent variable. To test this hypothesis the independent variable, HCPCS billing rate for 2012 - 2019 Medicare Provider Fee Schedule, for physicians working in ambulatory practices were compared with the physicians employed by the hospital after acquisition. The independent variable HCPCS billing code is a constant for each physician group. The facility fee is used for ambulatory physician practice billing. The non-facility fee with the additional conversion factor or dollar value indicated by the dependent variable, OPPS, was used for the hospital employed physicians. For this research study, the independent HCPCS code variables containing a dollar value in the OPPS, dependent variable, column of the table were used equating to approximately 1,000 HCPCS codes per year.

A paired samples t-test compared independent HCPCS code variables prior to acquisition and the same HCPCS codes with the dependent OPPS variable after acquisition. The statistical test used was a one-way ANOVA if the dependent variable is normally distributed (Morgan et al., 2013). If the assumptions of the paired samples t-test were violated, the non-parametric Wilcoxon test was utilized as it is the appropriate statistical test (Morgan et al., 2013).

Reliability and Validity

The reliability and validity methods used in a quantitative study are an important component of the scientific method and, as such, the analysis and generalization of the results obtained are evaluated based on the sample size used for the research study (Creswell, 2014). The larger the sample size the greater the ability to consider it a representative sample that can be generalized (Creswell & Poth, 2018). The objective nature of quantitative research is appropriate when the data can be quantified, the structured and scientific method used in quantitative studies provide a systematic process providing statistical data analysis (Queiros, Faria, & Almeida, 2017). This section addressed the risk to the reliability and validity of this research study to provide a perspective for the evaluation of the analysis.

Reliability

The ability to reproduce results or to reach the same result when performing the same testing offers a measure of reliability to a quantitative study (Robson & McCartan, 2016). Consistency is important to the reliability of the research study (Creswell, 2014). As indicated in its use of the scientific method, a quantitative study should create the same result consistently when a test is repeated (Creswell & Poth, 2018).

This research study was quantitative and constructed using archival, third-party data that was publicly available. Multiple sources were used to retrieve the data, the primary data elements include the percent increase in health insurance rates by year, the percent increase in physicians acquired by hospital entities and the HCPCS billing rates for ambulatory and hospital physicians.

This research study focused on the results of these data elements within Virginia. The data elements chosen are an industry specific data set for healthcare organizations (Cleverley & Cleverley, 2018). The Virginia Insurance Commissioner publishes the health insurance rates and provide a reliable measure of the average.

Validity

The accuracy of the study results provides academic research with validity (Robson & McCartan, 2016). The consistency of data offers reliability but not data validity as the intent of the data is an important consideration when evaluating results (Robson & McCartan, 2016). Validity is improved when multiple tests are performed on the data yielding the same result, evidence from multiple sources provides a much greater support for validity in research (Morgan et al., 2013).

Content evidence was used in this study to support the validity that the concept being measured is reasonably represented (Morgan et al., 2013). This study included the insurance rate increase for 2012 - 2019 only. In addition, the study utilized the billing fees as represented by the HCPCS code for only

Medicare, as this is an industry standard. This study has no accommodation for billing rates used by other private insurance payers, and the results should not be extrapolated on a dollar value basis. The other variables used in this study are industry standard terms and are commonly accepted, this provides a reasonable assurance of consistency and reduces the validity risk. This study also utilized face-validity as the tests were examined on a surface level, this validity testing is more subjective and is based on industry experience (Queiros et al., 2017).

The risk of generalizability centers on incorrect conclusions being drawn from sample data (Robson & McCartan, 2016). This risk was addressed by expanding the sample size to provide a greater generalization of the group that is represented in the study (Robson & McCartan, 2016). The entire active population of physicians working in the state of Virginia were included in this study so that the results offered a more robust population to mitigate the concern of generalization.

APPLICATION TO PROFESSIONAL PRACTICE AND IMPLICATIONS FOR CHANGE

The increase in hospital acquisition of ambulatory physician offices has changed the landscape of ownership within this subset of the healthcare industry (Capps et al., 2018; Yang, 2014). As the healthcare market has matured, the increase in governmental requirements has also risen, increasing healthcare delivery costs (Camilleri, 2018; D'Arrigo, 2019; Guy & Tao, 2015). This increase in governmental restrictions and the mandate of EHR technology has created a disproportionally large increase in cost for the smaller ambulatory physician office (Blumenthal et al., 2015; Brookstone, 2012). In addition, the enactment of e-prescribing, HIPAA, HITECH, and ACA have further intensified the technological disparity among healthcare providers (French et al., 2016; Hecker & Edwards, 2014). This disparity has created a greater opportunity for hospitals to increase acquisition activity as physicians in small, privately owned, practices seek alternatives to the cost of legislation (Carlin et al., 2016).

Small businesses and, to a lesser extent, large businesses within the U.S. continue to experience rising health insurance costs (Chernew et al., 2005; Dauda, 2017). This increase in employee benefit costs, a fixed cost, has lowered the ability for small business to enact growth plans including the addition of its employee base because of a reduction in operating income (Dennis, 2016). Employee benefits, particularly health insurance, have been under increased scrutiny by employees entering the market as businesses shift a portion of the increasing cost back to the employee to maintain operational profitability (Guo & Tao, 2015). This shift has created a disparity in opportunity for small business owners as they must compete with larger businesses that have lower health care increases based on a wider population pool of actual cost spread (Jacobe, 2013).

The findings of this research study are presented in the section below. The research questions and associated hypotheses presented in Section 1 were reviewed with the intent of contributing to academic literature. The organization of this section presents the findings as follows: (a) overview of the study, (b) presentation of findings, (c) applications to professional practice, (d) recommendations for action, (e) further study recommendations, (f) researcher reflections, and (g) summary and conclusions of the study.

Overview of the Study

Although the acquisition of ambulatory physician offices has been used as a method of hospital growth two distinct times over the last 30 years, the most recent acquisition activity has not followed the traditional cycle as physicians have not exited the employ of hospitals after their employment contracts expired (McCue, 2015; McCue et al., 2015). This cycle change created recent additions to academic literature as an examination of governmental legislation, the concern of anti-trust issues, and business theory warrant further study across several topics (Greaney & Ross, 2016). Although much of the research has focused on the cost of enacted legislation, research examining the efficacy of the relationship between the increased cost of health insurance premiums and the increased acquisition activity has remained inconclusive (Dennis, 2016; Himmelstein & Woodhandler, 2016; Lahm, 2014). This study was developed and conducted to contribute to the current body of academic literature and knowledge to bridge the identified gap.

The study's research design was chosen based on the intention of examining the relationship between the variables to appropriately address each research question and associated hypotheses outlined in Section 1 (Creswell, 2014). Each research question examined the relationship between acquisition activity and its impact on billing rates and insurance costs between the years of 2012 and 2019. The sample size of all active physicians within the U.S. was reduced to include only those working in Virginia. This study included a second sample size of HCPCS billing codes utilized by physicians in ambulatory care and the HCPCS billing codes with the added OPPS codes utilized by physicians who remain in an ambulatory care setting but were acquired by a hospital entity. The sample size was reduced to include only the HCPCS billing codes that contained a dollar value in the OPPS payment amount based on the Medicare payment tables for the years 2012 - 2019. This reduced the sample size to 4,199 records from the total population of 9,254 records based on the 2019 HCPCS coding file available for public download from the Centers for Medicare and Medicaid website.

Incorporating two population groups within this research study allowed for a more robust analysis of acquisition activity providing more insight and application considerations for the healthcare and insurance industries (Robson & McCartan, 2016). The evaluation of the change in percentages between physicians that were self-employed and those under the employment of a hospital indicated statistically similar pattern changes between the years of examination. This research suggests that acquisition activity increases the cost of healthcare based on the increased billing rates for procedures performed within the physician office and outside of the hospital setting based solely on the change of ownership of the ambulatory practice (Baker et al., 2018). This increase in healthcare billing rates is passed to the health insurance companies creating a higher cost to premiums paid ratio increasing the subsequent rates for business entities with a disproportionate increase borne by small and medium-sized organizations.

Presentation of the Findings

The section below presents the findings of the research study. The study investigation was designed to address research questions as outlined in Section 1. The hypotheses associated with each question are provided with a description of how each hypothesis and sub-hypotheses was tested as outlined in the design study methodology. The associated research question is linked to the conclusion of the tests conducted.

The data were constructed based on the annual percentage rate of change in the number of self-employed physicians and the percentage of physicians in the employment of hospitals for the years of 2012 - 2018, the statistical data for 2019 has not been published at the time of this research study. The increase in acquisition activity continues to impact the prices and spending across the healthcare marketplace (Capps et al., 2018). The economic impact of these changes continues to be discussed in relationship to the cost of technology, legislation, and pricing (Cuellar & Gertler, 2003).

The billing rate for self-employed physicians and hospital-employed physicians, still working in an ambulatory practice setting, were examined for the years of 2012 - 2019. The billing rates were based on the Medicare allowable rates for each HCPCS code and the corresponding OPPS billing increase by procedure (Cleverley & Cleverley, 2018). The actual health insurance rates for 2012 - 2019 were examined based on single coverage and family coverage, ownership of the business entity, and age of insured to provide additional insight for the study. The increased health insurance costs are impacting the level of insurance coverage offered to employees as increased participation in high-deductible plans continues to increase (Chernew et al., 2005).

Descriptive statistics were run on each relationship and pairing relevant to its hypothesis to confirm the appropriate parametric or non-parametric testing based on statistical distribution. Described in Section 2, a paired samples *t-test* was determined to be the appropriate parametric test as indicated by the number of independent and dependent variables allowing comparison of the independent variable (Morgan et al., 2013). If the assumptions of the paired samples *t-test* were violated, the nonparametric Wilcoxon test will be employed (Morgan et al., 2013). The paired samples *t-test* assumes a normal distribution of the dependent variable as indicated by a normally shaped distribution curve (Morgan et al., 2013).

An inherent assumption or condition when using a paired samples *t-test* is the dichotomy of the independent variable and the paring of groups. The skewness of the two variables will be assessed to

determine if the dependent variable is normally distributed as required for the use of a paired samples *t-test* (Morgan et al., 2013). A normally distributed curve is evidenced by symmetry, it is in proportion, mirrored, and has no kurtosis (Morgan et al., 2013). Morgan et al. (2013) provided an arbitrary guideline indicating that a skewness of more than +1.0 or less than -1.0 reveals a skewed distribution, and a nonparametric test is required. Using a two-tailed t-test or an ANOVA skewness outside of the guideline may not impact the result (Morgan et al., 2013).

Morgan et al. (2013) described kurtosis as a peak of distribution that is outside of the normal curve as leptokurtic and a heavy or flat tail on the curve as a platykurtic. As noted by the authors, statistical analysis does not seem to be impacted by kurtosis, so it is usually not included in the testing of data (Morgan et al., 2013). The kurtosis for a standard normal distribution is 3, when the kurtosis is more than +3.0 or less than -3.0 it is indicative of a distribution that is not normally shaped and a nonparametric test should be utilized (Morgan et al., 2013).

The section below provides the details of the results for each hypothesis and its related sub-hypothesis. The descriptive statistics of each are provided in support of the use of a parametric *t-test* or a nonparametric Wilcoxon related samples test. The statistical analysis for each result is provided and the implications and statistical significance is clearly stated. The first null hypothesis proposed there is no statistically significant difference between the billing rates before acquisition of ambulatory medical practices in Virginia and the rates after acquisition. To test this hypothesis, the HCPCS billing rate before acquisition was compared with the rate billed after acquisition using a paired samples t-test. Table 2 provides the descriptive statistics of the HCPCS rates billed by ambulatory physicians and the rates billed after practice acquisition.

TABLE 2
HCPCS BILLING RATES BEFORE ACQUISITION V. AFTER ACQUISITION

Category	Mean	Standard Deviation	Skewness	Kurtosis
Before Acquisition	186.9	180.61	2.96	18.34
After Acquisition	656.3	699.74	2.76	9.96

As the skewness and the kurtosis of the mean returns are indicative of a non-normally shaped distribution, the assumption of the paired samples *t-test* was violated. As such, the Wilcoxon two related samples test was appropriate for the statistical analysis between the pairing, see Table 2 in Appendix A.

Wilcoxon signed ranks tests were used to compare the change in billing rate of the HCPCS billing code before and after acquisition by a hospital entity. Of the 4,199 codes included in the study, the billing rate after acquisition was higher for every HCPCS billing code. The difference between before acquisition and after acquisition was significant, $z = -56.12$, $p = .00$, $r = -.87$. The effect size was much larger than typical with an r statistic that was almost perfectly correlated (Morgan et al., 2013). See Appendix A for summarized results.

In summary, the Wilcoxon test for two related samples indicates there is a statistically significant difference between the rates billed for procedures before an ambulatory practice is acquired and after an acquisition by a hospital entity. As such, the null hypothesis stating there is no statistically significant difference between the billing rates for procedures before acquisition and after acquisition of an ambulatory practice is rejected. In other words, there is a statistically significant difference between the HCPCS billing rates for the same procedure before and after an ambulatory practice is acquired by a hospital. As described by Morgan et al. (2013), an r size of > .70 indicates a much larger than typical relationship strength, with an r = -.88. An r statistic indicates that the relationship is almost perfectly correlated.

Relationship of Hypotheses to Research Question

Each research question is addressed below, and the results of the hypothesis and sub-hypotheses are linked back to the appropriate research question. As a result, the conclusions presented indicate that questions have been addressed in an appropriate manner.

Research Question

What is the difference between billing rates for procedures before and after acquisitions of ambulatory practices in Virginia? The first null hypothesis and sub-hypothesis proposed that there is no statistically significant difference between the billing rates for procedures before and after acquisition of ambulatory medical practices was rejected. Descriptive statistics were reviewed, indicating a nonnormal distribution requiring performance of a Wilcoxon of the two related samples test. This statistical analysis is appropriate based on the number of independent variables and dependent variables (Morgan et al., 2013).

The HCPCS billing code rates for ambulatory practices were compared with the billing rates of practices after acquisition. The HCPCS billing codes were downloaded for the years 2012 – 2019 from the Centers for Medicare & Medicaid Services. The same HCPCS code, per year, were compared annually to identify the change in rate after acquisition. The same process was followed by the OPPS billing codes specifically identified by a dollar value rather than a conversion factor allowing for comparability by year.

Of the 4,199 codes included in the study, the billing rate after acquisition was higher for every HCPCS billing code. There was a statistically significant difference in the HCPCS billing codes before acquisition and after acquisition, $N = 4{,}199$, $z = -56.12$, $p = .00$, $r = -.87$. See Appendix A for summarized results. As Morgan et al. (2013) described, an r size of > |.70| indicates a much larger than typical relationship strength, with an r = -.88. An r statistic this high indicates that the relationship is almost perfectly correlated.

Summary of the Findings

As discussed in previous sections, the results of H1 indicate a statistically significant difference between the billing rates for procedures before acquisition and after acquisition, rejecting the null. Further, the effect size has a much larger than the typical strength indicating almost perfect correlation between these variables. This finding is consistent with Capps et al. (2018) and Dauda (2017) who concluded that the acquisition activity was driven by increased cost of procedures due to the allowance of OPPS billing rates outside of a hospital setting. This is supported by Cleverly and Cleverly (2018) based on billing procedures for ambulatory and hospital procedures driven by the entity's ownership.

Applications to Professional Practice

This research study contributes to the body of knowledge regarding the increase of acquisitions of ambulatory physician practices by hospital entities (Capps et al., 2018; Cuellar & Gertler, 2003) and the impact on the rising cost of health insurance premiums (Chernew et al., 2005; Dauda, 2017). The rising percentage increase of health insurance premiums have created operational profitability issues for small to medium sized organizations (Dennis, 2016). Previous research has primarily focused on the increase in governmental legislation and the additional cost burden on hospital and healthcare organizations (Blumenthal et al., 2015; Camilleri, 2018), but the initial cost of these mandates has been absorbed health insurance premiums continue to increase year over year creating a gap in academic research surrounding this continued cost increase (Chernew et al., 2005; Depew & Bailey 2015).

The need for continued study is evident as small businesses experience growing cost of employee benefits each year leading to a delay in strategic initiatives to maintain benefit levels (Guo & Tao, 2015). Additionally, the demographic of the U.S. continues to age, creating a larger spend on healthcare costs by the insurance companies or the patient (Himmelstein & Woodhandler, 2016). The ACA created a federal mandate requiring health insurance for all U.S. citizens through a healthcare exchange (French et al., 2016). Studies show that over 41 percent of small businesses have delayed hiring decisions and over 38 percent have reduced growth plans or full-time employees to avoid the penalties of the ACA (Lahm, 2014).

Hospital Acquisitions

The continued rise of hospital employed physicians impacts the reimbursement rates set by the Centers for Medicare and Medicaid (Baker et al., 2018). These rates are foundational and serve as a basis for all insurance carrier reimbursement plans for physicians who are a participating provider (Cleverly & Cleverly, 2018). In addition, the acquired physician practice continues operations after acquisition with little transparency of an acquisition transaction by the general public. A typical patient, with health insurance, will notice minimal changes during routine physician visits after the acquisition. For patients with a high deductible insurance plan, the initial cash outlay to meet the deductible will occur much faster because of the additional OPPS fee that accompanies the procedure billing rate (Fifer, 2016; Himmelstein & Woodhandler, 2016).

Increased acquisition activity creates diminished competition within the healthcare market leading to less patient choice and a decrease in patient care (McCue, 2015). The acquisition of private physician practices have created a monopolistic effect for many smaller communities that experience only one choice for healthcare. Further, the increase in acquisition activity gives rise to anti-trust issues as discussed by Greaney and Ross (2016).

The healthcare market is confronting maturity. The theory of market maturation drives strategic decisions designed to sustain an organization and provide competitive advantage (Guerin-Calvert, 2014; Thompson et al., 2018). One of the strategies used in a mature market includes acquisition, this provides a reduction in vertical or horizontal competition (David & David, 2017). As competition is reduced, the price of healthcare services may rise and with limited or no competition patients and insurance carriers will bear the financial burden of monopolistic behavior (Greaney & Ross, 2016).

As the theories of market maturation, Porter's five forces, and economic supply and demand are examined within the healthcare market, the importance of academic research evaluates the impact of this increased acquisition (Thompson et al., 2018). In addition to adding to the body of academic knowledge, the findings of this study were intended to apply to professionals within the business community: healthcare, insurance, and small to medium sized business leadership. Further, the cost of the acquisitions is applicable to professionals across all organizations as well as individual healthcare consumers as addressed in the first hypothesis of this study.

Recommendations for Action

This applied research study seeks to clarify the quantitative ramifications of the increase in acquisition activity in the healthcare industry and its impact on the healthcare insurance cost for business entities, primarily focusing on small to medium sized businesses within the 3-200 employee range. As academics continue to exam the impact of the ACA, HITECH, HIPAA, and other governmental legislative activities on the cost and quality of healthcare, this study adds to the growing knowledge regarding the acquisition impact on the cost of healthcare. The target audience for the results of this study are professionals within the healthcare insurance industry and business entities that provide healthcare for employees as part of its benefit package. As such, the healthcare insurance industry can incorporate the findings herein to lobby for a change in the allowable billing rates based solely on the ambulatory practice acquisition.

Billing Rates for Procedures

This study extends academic knowledge of the healthcare billing industry, its billing procedures, and the addition of the OPPS to the HCPCS billing codes after acquisition of ambulatory medical practice. The findings should be incorporated in current financial arguments surrounding the exclusion of OPPS rates for billing purposes provided that the ambulatory practice continues operations in essentially the same manner as before the acquisition. Thus, the premise of the OPPS fee does not apply as it provides an additional allowable amount for services performed within a healthcare setting based on the increased overhead cost of the hospital. The overhead within the ambulatory or physician office setting does not increase or accumulate at the same rate as is found within a hospital. The small to medium sized business owners, through the National Federation of Independent Business or other organizations, should incorporate the findings in journal articles and other written arguments detailing the increased cost of healthcare as a result

of the acquisition of ambulatory practices. One consideration would be the review of the OPPS rates to determine a more equitable overhead rate for ambulatory acquisitions. The limitation would be the ability to obtain governmental approval for this change.

The ability of a hospital to acquire ambulatory practices allows for an immediate increase in procedural billing income, as described within the study, without the additional overhead cost. Although there is an associate cost of acquisition, this is not a continued cost of overhead and does not justify the allowance of OPPS billing (Dauda, 2017). Further, many hospitals are not for profit creating greater savings on taxes, income, personal property, business tax, and real estate tax. This decrease in revenue for the community can be large, especially as hospitals are purchasing greater than 50 percent of ambulatory practices.

Further studies should enable small- to medium-sized businesses to lobby more effectively to address the annual percentage increase of health insurance premiums. The ability to purchase health insurance across state lines, part of the ACA, may have unintended consequences of allowing health insurance companies to select the healthiest to mitigate their risk of loss. As a result, business insurance premiums may continue to rise at a significant percentage creating further fixed cost issues and impacting operational profitability.

Healthcare Cost

As previously mentioned in the research study, the percentage of premiums of healthcare insurance continues to grow annually (Chernew et al., 2005; Dennis, 2016; Depew & Bailey, 2015). Research question two examined the relationship between acquisition activity and Virginia's increased health insurance rates. Additionally, the third hypothesis examined the difference in percentage increase based on the age bands for individuals and the firm types for business healthcare insurance plans. Finally, the relationship between the increase in healthcare premiums and the size of the firm was reviewed to determine if the rising cost of healthcare decreased the percentage of employees covered under a business plan.

Those most impacted by these results include businesses that provide healthcare as a benefit to their employees. The rising cost of healthcare premiums creates operational profitability issues, including reducing full-time employees and increasing use of high deductible health insurance plans (Dauda, 2017; Depew & Bailey, 2015; Himmelstein & Woodhandler, 2016). This study's findings could be communicated through academic and non-academic or professional journal articles targeting small to medium sized businesses. Practitioners currently seeking methods of risk mitigation when addressing the rising cost of healthcare could also benefit from the publication of the study results. Further, small business entities may use the results of the study to lobby for a change or a modification to OPPS rates when the ambulatory practice remains separated from the hospital entity and/or for a limit in the allowance or percentage increase of annual health insurance premiums. In publishing these results, the education of those within the small to medium sized business community would be increased. Further, individuals would also benefit from the results of this study as they seek to attain the highest quality of care and outcomes for the most reasonable cost.

RECOMMENDATIONS FOR FURTHER STUDY

The most obvious consideration is the limited time of data included in analysis. Many hospital acquisitions have occurred over the last five years and the full impact of the change in billing rates may not yet be included in the current health insurance premium cost. As longitudinal data provide greater authoritative guidance, a larger sample size (n = 5 years) may provide different statistical results that those yielded in this study. Arguably, the increase in insurance premiums may rise at a faster percentage as acquisition activity reaches maximum saturation. Further, the reduction in competitive forces should also be studied as healthcare within many communities may result in a singularly owned entity limiting patient choice and increasing cost.

The results of this study indicated no difference or relationship for the percentage increase in the cost of healthcare premiums, however, there were some interesting changes in the cost increases for the years 2017 and 2018, which warrant further study. The study could be expanded to include additional healthcare

premium drivers. As the U.S. population continues to age, the resulting cost of care will also grow. Annual premium increases for business entities may increase, leading to increased operational performance issues. The results of this study although not addressed in this study. This may lead to a greater increase in discrimination against older employees who are, at this stage of life, likely to be greater users of healthcare. Further, the continued percentage increase in healthcare costs could be compared with the percentage increase of other business or individual insurance plans.

SUMMARY AND STUDY CONCLUSIONS

The authors intended to research increased acquisition activity within the healthcare market to determine if the activity was creating an increased cost for healthcare procedures. In addition, the relationship between the increased acquisitions activity and the increase in health insurance premiums for small to medium sized businesses was examined to determine if this relationship was statistically significant. A total of 4,199 HCPCS billing codes were included in the sample section for the billing rate population for 2012 - 2019. The increase in insurance premiums rates for the years 2012 – 2018 comprised the second sample size, the 2019 data was not published at the time of this research study. The incorporation of: a) the percentage increase in insurance rates based on age bands and 60+; b) the percentage increase in health insurance rates for single and family coverage based on organization type for public, private, and not-for-profit firms; and c) the percentage decrease in insurance coverage for employees based on the size of the firm. These additional factors were integrated into the study to provide a more robust analysis of the mitigating factors for the increases in health insurance premiums.

The percentage increase in billing rates after acquisition was statistically significant. This research suggests that although the percentage increase in hospital physicians is not statistically significant at the time of study, it should be monitored as acquisition activity continues. At some future point, there may likely be a statistically significant impact as the percentage of hospital employed physicians continue to increase. Although not statistically significant, there were several interesting findings surrounding the study of the percentage of health insurance rate increases. The percentage increases in age bands and the percentage increase in the single insurance rate for small public firms during 2018 that warrant further study to determine the cause of these anomalies.

The results of this study contribute to the academic research and body of literature on the rising cost of health insurance costs. However, additional research still needs to be completed on this issue. Recommendations for further research include a study of the long-term impact of hospital acquisition on the cost of health insurance, quality of patient care, and the reduction of entrepreneurial-minded medical professionals. Currently the ACA remains in effect across the U.S., the cost of this legislative Act will continue to disrupt the healthcare industry. These changes require additional study to understand if the desired outcomes of lower cost and improved quality of care presented as the desired outcome of this Act have been met or if it served as a catalyst for increased costs within the healthcare system. Understanding the cost component of healthcare premiums can benefit society and business organizations.

REFERENCES

Baker, J.J., Baker, R.W., & Dworkin, N.R. (2018). *Health care finance* (5th ed.). Burlington, MA: Jones & Bartlett Learning.

Becker, T.E., Atinc, G., Breaugh, J.A., Carlson, K.D., Edwards, J.R., & Spector, P.E. (2016). Statistical control in correlational studies: 10 essential recommendations for organizational researchers. *Journal of Organizational Behavior*, *37*(2), 157–167. http://dx.doi.org/10.1002/job.2053

Blocher, E.J., Stout, D.E., Juras, P.E., & Smith, S.D. (2019). *Cost management: A strategic emphasis* (8th ed.). New York, NY: McGraw-Hill Education.

Bloomfield, J., & Fisher, M.J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses' Association*, *22*(2), 27–30. http://dx.doi.org/https://doi.org/10.33235/jarna.22.2.27-30

Blumenthal, D., Abrams, M., & Nuzum, R. (2015). The Affordable Care Act at 5 years. *New England Journal of Medicine*, *372*(25), 2451–2458. http://dx.doi.org/doi:10.1056/NEJMhpr1503614

Brookstone, A. (2012, February 5). *The impact of EHRs on productivity: Physicians share experiences* [Blog post]. Retrieved from http://www.americanehr.com/blog/2012/02/impact-of-ehr-on-productivityproductivity/

Camilleri, S. (2018). The ACA Medicaid expansion, disproportionate share hospitals, and uncompensated care. *Health Services Research*, *53*(3), 1562–1580. http://dx.doi.org.ezproxy.liberty.edu/10.1111/1475-6773.12702

Capps, C., Dranove, D., & Ody, C. (2018). The effect of hospital acquisitions of physician practices on prices and spending. *Journal of Health Economics*, *59*, 139–152. http://dx.doi.org/10.1016/j.jhealeco.2018.04.001

Carlin, C.S., Feldman, R., & Dowd, B. (2016). The impact of hospital acquisition of physician practices on referral patterns. *Health Economics*, *25*(4), 439–454. http://dx.doi.org.ezproxy.liberty.edu/10.1002/hec.3160

Chapman, L.W., Ferris, K., & Zachary, C. (2017). Utilizing break-even analysis in a competitive laser market. *Wiley Periodicals Inc.*, pp. 10–11. https://doi.org/10.1002/lsm.22753

Chernew, M., Cutler, D.M., & Keenan, P.S. (2005). Increasing health insurance costs and the decline in insurance coverage. *Health Services Research*, *404*(4), 1021–1039. http://dx.doi.org/doi:10.1111/j.1475-6773.2005.00409.x

Cleverley, W.O., & Cleverley, J.O. (2018). *Essentials of Health Care Finance* (8th ed.). Burlington, MA: Jones & Bartlett Learning.

Cowley, D. (2004). HIPAA: One year later. *Public Relations Strategist*, *10*(2), 18–20. http://ezproxy.liberty.edu/login?url=https://search-proquestcom.ezproxy.liberty.edu/docview/204920992?accountid=12085

Creswell, J.W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

Creswell, J.W., & Poth, C.N. (2018). *Qualitative inquiry & research design. Choosing among five approaches* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Cuellar, A.E., & Gertler, P.J. (2003). Trends in hospital consolidation: The formation of local systems. *Health Affairs*, *22*(6), 77–87. http://dx.doi.org/10.1377/hlthaff.22.6.77

D'Arrigo, T. (2019, July 2). HHS adjusts penalties for HIPAA violations. *Psychiatry News*. http://dx.doi.org/https://doi.org/10.1176/appi.pn.2019.6b11

Dauda, S. (2017, May 11). Hospital and health insurance markets concentration and inpatient hospital transaction prices in the U.S. health care market. *Health Services Research*, *53*(2), 1203–1226. http://dx.doi.org/10.1111/1475-6773.12706

David, F.R., & David, F.R. (2017). *Strategic management: A competitive advantage approach* (16th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Dennis Jr., W.J. (2016, October 31). A new healthcare longitudinal survey by the NFIB Research Foundation 2013. *NFIB Research Foundation*. Retrieved from https://www.nfib.com/surveys/aca-2013/.

Depew, B., & Bailey, J. (2015). Did the Affordable Care Act's dependent coverage mandate increase premiums? *Journal of Health Economics*, *41*, 1–14. http://dx.doi.org/https://doi.org/10.1016/j.jhealeco.2015.01.004

Fifer, R. (2016). Health care economics: The real source of reimbursement problems. *American Speech-Language-Hearing Association*. Retrieved from https://www.asha.org/Articles/Health-Care-Economics-The-Real-Source-of-Reimbursement-Problems/

French, M.T., Homer, J., Gumus, G., & Hickling, L. (2016). Key provisions of the Patient Protection and Affordable Care Act (ACA): A systematic review and presentation of early research findings. *Health Services Research*, *51*(5), 1735–1771. http://dx.doi.org/https://doi.org/10.1111/1475-6773.12511

Greaney, T.L., & Ross, D. (2016). Navigating through the fog of vertical merger law: A guide to counseling hospital-physician consolidation under the Clayton Act. *Washington Law Review*, *91*(1), 199–251. Retrieved from http://ezproxy.liberty.edu/login?url=https: //search-proquest-com.ezproxy.liberty.edu/docview/1790602538?accountid=12085

Guerin-Calvert, M.E. (2014). Competitive effects analyses of hospital mergers: Are we keeping pace with dynamic healthcare markets? *The Antitrust Bulletin*, *59*(3), 505–513. http://dx.doi.org/doi:10.1177/0003603X1405900304

HCPCS - General information. (2019). Retrieved from https://www.cms.gov/Medicare/Coding/MedHCPCSGenInfo/index

Hecker, L.L., & Edwards, A.B. (2014). The impact of HIPAA and HITECH: New standards for confidentiality, security, and documentation for marriage and family therapists. *The American Journal of Family Therapy*, *42*(2), 95–113. http://dx.doi.org/ https://doi.org/10.1080/01926187.2013.792711

Himmelstein, D.U., & Woodhandler, S. (2016). The current and projected taxpayer shares of US health costs. *American Journal of Public Health*, *106*(3), pp. 449–452. http://dx.doi.org/10.2105/AJPH.2015.302997

HIPAA Journal. (2019). HIPAA explained. *HIPAA Journal*. Retrieved from https://www.hipaajournal.com/hipaa-explained/

Howard, D.H., David, G., & Hockenberry, J. (2017). Selective hearing: Physician-ownership and physicians' response to new evidence. *Journal of Economics & Management Strategy*, *26*(1), 152–168. http://dx.doi.org/https://doi.orgezproxy.liberty.edu/10.1111/jems.12178

Jacobe, D. (2013). *Half of U. S. small businesses think health law bad for them.* Retrieved from https://news.gallup.com/poll/162386/half-small-businesses-think-health-law-bad.aspx

Kaiser Family Foundation. (2020). *Professionally Active Physicians* [Data file]. Retrieved from https://www.kff.org/

Kirkwood, J.B. (2016). Buyer power and healthcare prices. *Washington Law Review*, *91*(1), 253–293. Retrieved from http://ezproxy.liberty.edu/login?url=https://search-proquestcom.ezproxy.liberty.edu/docview/1790603454?accountid=12085

Lahm Jr., R.J. (2014). Small business and Obamacare: The new law's rules do apply to the vast majority of all businesses. *Entrepreneurial Executive*, *19*, 131–147. Retrieved from https://link.gale.com/apps/doc/A397579784/ITOF?u=vic_liberty&sid=ITOF&xid=19b4f752

Lifetime & Annual Limits. (2017). Retrieved from https://www.hhs.gov/healthcare/about-theaca/benefit-limits/index.html

Mayer, S., Kiss, N., Laszewska, A., & Simon, J. (2017, August 14). Costing evidence for health care decision-making in Austria: A systematic review. *PLOS ONE*, *12*(8), 1–18. http://dx.doi.org/https://doi.org/10.1371/journal.pone.0183116

McCue, M.J. (2015). Hospital acquisitions before healthcare reform. *Journal of Healthcare Management*, *60*(3), 186–196. Retrieved from http://ezproxy.liberty.edu/login?url =https://search-proquest-com.ezproxy.liberty.edu/docview/1685997011?accountid=12085

McCue, M.J., Thompson, J.M., & Kim, T.H. (2015, May 1). Hospital acquisitions before healthcare reform. *Journal of Healthcare Management*, *60*(3), 186–204. Retrieved from https://link-gale-com.ezproxy.liberty.edu/apps/doc/A417471587/AONE?u=vic _liberty&sid=AONE&xid=d72bd0a5

McIntyre, G. (2020). *What is the definition of small business?* Retrieved from https://www.fundera.com/blog/sba-definition-of-small-business

Mihaylova, T., Dimitrov, T., Gradinarova, N., & Todorova, D. (2018). Characteristics of human resource planning in healthcare. *Journal of IMAB*, *24*(1), 1953–1956. http://dx.doi.org/https://doi.org/10.5272/jimab.2018241.1953

Mobley, L.R. (1997). Multihospital chain acquisitions and competition in local health care markets. *Review of Industrial Organization*, *12*, 185–202. http://dx.doi.org/https://doiorg.ezproxy.liberty.edu/10.1023/A:1007747713353

Morgan, G.A., Leech, N.L., Gloeckner, G.W., & Barrett, K.C. (2013). *IBM SPSS for introductory statistics: Use and interpretation* (5th ed.). New York, NY: Routledge.

Queiros, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*, *3*(9), 369–387. http://dx.doi.org/doi: 10.5281/zenodo.887089

Rees, C., Alfes, K., & Gatenby, M. (2013, February 14). Employee voice and engagement: connections and consequences. *The International Journal of Human Resource Management, 24*(14), 2780–2798. https://doi.org/10.1080/09585192.2013.763843

Reschovsky, J.D. (2015). Hospital Acquisition of Physician Groups: On the Road to Value-Based or Higher-Priced Care? *JAMA Internal Medicine, 175*(12), 1939–1941. http://dx.doi.org/10.1001/jamainternmed.2015.6183

Robson, C., & McCartan, K. (2016). *Real world research* (4th ed.). Hoboken, NJ: John Wiley & Sons.

Schenker, J.D., & Rumrill Jr., P.D. (2004). Causal-comparative research designs. *Perspectives on Scientific Inquiry, 21*(3), 117–121. Retrieved from https://content.iospress.com/articles/journal-of-vocational-rehabilitation/jvr00260

Thompson, A.A., Peteraf, M.A., Gamble, J.E., & Strickland III, A.J. (2018). *Crafting & executing strategy: The quest for competitive advantage* (21st ed.). New York, NY: McGraw-Hill Education.

Woodlock, P. (2014, January 1). Obamacare: Impact on business combinations. *The Journal of Corporate Accounting & Finance*, *25*(2), 19–26. http://dx.doi.org/10.1002/jcaf.21918

Yang, S. (2014, October 21). Hospital mergers and acquisitions leading to increased patient costs. *Mind & Body, Research*. Retrieved from https://news.berkeley.edu/2014/10/21/hospital-mergers-acquisitions-patient-costs/

Yin, R.K. (2018). *Case study research and applications design and methods* (6th ed.). *Sage.*