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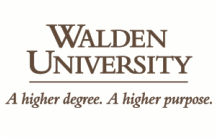

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Managerial Intervention Strategies to Reduce Patient No-Show Rates

Charl Mattheus
Walden University

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Walden University

College of Management and Technology

This is to certify that the doctoral study by

Charl Mattheus

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Carol-Anne Faint, Committee Chairperson, Doctor of Business Administration

Dr. David Moody, Committee Member, Doctor of Business Administration Faculty

Dr. Edward Paluch, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

Managerial Intervention Strategies to Reduce Patient No-Show Rates

by

Charl Mattheus

MBA, Indiana Wesleyan University, 2011

BS, Indiana Wesleyan University, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

May 2017

Abstract

High patient no-show rates increase health care costs, decrease healthcare access, and reduce the clinical efficiency and productivity of health care facilities. The purpose of this exploratory qualitative single case study was to explore and analyze the managerial intervention strategies healthcare administrators use to reduce patient no-show rates. The targeted research population was active American College of Healthcare Executives (ACHE), Hawaii-Pacific Chapter healthcare administrative members with operational and supervisory experience addressing administrative patient no-show interventions. The conceptual framework was the theory of planned behavior. Semistructured interviews were conducted with 4 healthcare administrators, and appointment cancellation policy documents were reviewed. Interpretations of the data were subjected to member checking to ensure the trustworthiness of the findings. Based on the methodological triangulation of the data collected, 5 common themes emerged after the data analysis: reform appointment cancellation policies, use text message appointment reminders, improve patient accessibility, fill patient no-show slots immediately, and create organizational and administrative efficiencies. Sharing the findings of this study may help healthcare administrators to improve patient health care accessibility, organizational performance and the social well-being of their communities.

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Dedication

I dedicate this dissertation to my family. Profound gratitude to my loving parents, Malan and Cathy for their sacrifice to make me what I am today. I dedicate this work and give special thanks to my wife, Deborah, and two children, Carl and Rhea. Thank you for your love, moral support, and encouragement throughout my doctoral journey. You have been a source of inspiration to me.

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Section 1: Foundation of the Study

Healthcare expenditures in the United States increased by 5.3% to $3.0 trillion in 2014, following a 2.9% increase in 2013 (Centers for Medicare & Medicaid Service [CMS], 2015). The healthcare sector accounts for 17.5% of the U.S. gross domestic product (GDP), which amounts to $9,523 per person (CMS, 2015). CMS projects that U.S. healthcare spending will increase to $4.3 trillion and account for 19.3% of GDP by 2019.

Healthcare administrators use the iron triangle as a measure to evaluate the patient care they provide. The iron triangle consists of three interrelated factors: (a) cost containment, (b) quality of patient care, and (c) accessibility of patient care (Niles, 2015). Therefore, a reduction in health care accessibility may affect the quality of care (Dai, 2015; Fortin, Pries, & Kwon, 2015; Issel, 2016). Research data indicated patient no-show rates are a major burden on the U.S healthcare system (Friedberg, Schneider, Rosenthal, Volpp, & Werner, 2014; Kheirkhah, Feng, Travis, Tavakoli-Tabasi, & Sharafkhaneh, 2016). Healthcare administrators often underestimate the influence patient no-show rates on the rising healthcare expenditures (Lee, Min, Ryu, & Yih, 2013; Ma, Khataniar, Wu, & Ng, 2014). Additionally, high patient no-show rates not only waste valuable provider consultation time but also indirectly affect patient access to medical care (Berg et al., 2013; Liu & Ziya, 2014).

Background of the Problem

Healthcare providers and administrators spend valuable time preparing for their patient appointments, and if patients do not arrive for their scheduled appointments,

providers and administrators have wasted valuable clinical resources, including time and money (Tabish & Nabil, 2015). Providers in specialty clinics often prepare for complex appointments by reviewing patient medical records prior to their patient appointment consultations (Nuti et al., 2015). Clinical personnel prepare the consultation rooms for each patient appointment while administrative staff and scheduling staff invest a significant amount of time and effort to schedule these appointments. Healthcare administrators may also engage in various forms of appointment reminder activities on a daily basis to alert patients to their appointments and encourage the medical compliance with recommended follow-up services (Chen & Robinson, 2014; Morikawa, Takahashi, & Hirotani, 2015). Patients who do not attend their appointments create inefficiencies and discord in the workplace, as well as indirectly depriving other patients of seeing their healthcare provider when needed (Hwang et al., 2015) as well as creating a backlog which can also increase wait times for other patients (Higgins et al., 2015; Zacharias & Pinedo, 2014). High patient no-show rates are not only a waste of clinical resources and create disharmony in healthcare facilities, but they also create business and socioeconomic problems within the healthcare industry (Friedberg et al., 2014; Menendez & Ring, 2014). Since the implementation of the Affordable Care Act, more private practice healthcare providers choose to join larger, hospital-sponsored organizations because of revenue losses and financial burdens directly caused by the high patient no-shows rates (Tilburt et al., 2013).

Problem Statement

The negative impact of high patient no-show rates include increased health care costs, decreased healthcare access, and reduced clinical efficiency and provider productivity (Huang & Zuniga, 2014). A yearly average no-show rate of 26% at an academic pediatric neurology outpatient clinic caused an annual revenue loss of $257,724, with monthly losses averaging between $15,652 for October, 2013, to $27,042 in January, 2014 (Guzek, Gentry, & Golomb, 2015). The average loss per no-show appointment was $101 (Guzek et al., 2015). The general business problem is that patient no-show rates cause bottlenecking, significant decreases in net gains, revenue losses, and business inefficiency within healthcare facilities (Berg et al., 2013). The specific business problem is some healthcare administrators lack the managerial intervention strategies to address and reduce patient no-show rates.

Purpose Statement

The purpose of this exploratory qualitative single case study was to explore healthcare administrators' intervention strategies to reduce patient no-show rates. The targeted research population were active American College of Healthcare Executives (ACHE), Hawaii-Pacific Chapter healthcare administrative members. Healthcare administrator ACHE members all have operational healthcare administrative and supervisory experience (ACHE, 2016). I collected data from four volunteer healthcare administrators in Honolulu and neighboring Hawaiian Islands. Reducing patient no-show rates may indirectly result in healthcare organizations operating more efficiently, better provider utilization, and ultimately provide more healthcare accessibility (Friedberg et

al., 2014). An increase in efficiency may result in more profitability (Dabholkar, 2015). In addition, if healthcare facilities increase efficiency and profitability, patients may receive more health care access to medical treatment within a reasonable time and without driving up health care costs (Guzek et al., 2015). Sharing data and results from this study may contribute to an improvement in social well-being and increase health care access to patients in the culturally diverse health care delivery system of the Hawaiian Islands (Higgins et al., 2015).

Nature of the Study

The research methods initially considered for the study included qualitative, quantitative, and mixed methods. According to Vance, Talley, Azuero, Pearce, & Christian (2013), the quantitative research method incorporates data, statistical analysis, and closed-ended questions. The objective of a quantitative method is to evaluate the relationships between the variables that pertain to hypothesis testing (Bernard, 2013). The quantitative method did not allow for the ability to explore the perceptions and experience of the healthcare administrator participants during the study and therefore was not ideal for the study. Additionally, the quantitative method would not have allowed administrators to adequately convey their points of view and experiences (Bernard, 2013; Westerman, 2014). A mixed method design was not appropriate to explore the managerial intervention strategies used to reduce patient no-show rates because that study method makes use of both qualitative and quantitative methods (Venkatesh, Brown, & Bala, 2013). Additionally, the mixed method would be impractical because of complexity, time, and cost constraints for most doctoral dissertation studies (Frels &

Onwuegbuzie, 2013; Venkatesh et al., 2013). Researchers often use the qualitative research method to explore managerial strategies, business problems, and other social science subjects (Yin, 2014). According to Lee (2014), qualitative researchers explore business leaders' perceptions and their understanding of various business problem phenomena. Yin (2014) posited researchers who follow a qualitative method should focus on describing and explaining human interactions, meanings, and processes that take place in a natural setting. The purpose of the study was to gather and analyze the managerial intervention strategies healthcare administrators use to reduce patient no-show rates. Therefore, the qualitative research method was the most suitable for collecting information from research participants during the study. In accord with the work of Lee (2014), a qualitative research approach that included exploring healthcare administrators' beliefs and experiences about the specific business phenomenon of patient no-shows was ideal for the study and was therefore the method chosen.

The research designs considered for the study included phenomenological, ethnographic, narrative, and case study. Researchers using the phenomenological research design to explore the lived experience of their research participants as it pertains to the research phenomenon (Bloomberg & Volpe, 2012). The phenomenological research design was not suitable because the design requires a researcher to follow a small group of participants through extensive and prolonged engagement to develop patterns and correlations between the no-show patient phenomenon and the participants. The logistics and work situation of the study participants did not allow for the implementation of the phenomenological research design. Additionally, I did not select a

phenomenological design because the purpose of the study was to explore intervention strategies to reduce patient no-show rates and not to research the no-show phenomenon with patient participants. The ethnographic research design was not suitable for the study because the design focuses on the cultural and social behavior of the research participants instead of focusing on how and why they select the no-show intervention strategies they implement in the medical facilities (Marshall & Rossman, 2016). According to Bloomberg and Volpe (2012), narrative researchers report on stories their research participants experience during specific incidents. I did not select the narrative design because the study purpose was to explore intervention strategies to reduce patient no-show rates. According to Bongiovanni-Delarozière, Le, and Rapp (2014), case study designs allow researchers to analyze data and identify patterns and connecting themes to discover relationships, analyze multiple forms of information, and interpret outcomes. Additionally, case study research may provide an in-depth understanding of complex social and technical phenomena related to the efficient workflow of organizations (Yin, 2014). The case study design was most suitable for the study because it is useful for evaluating industry related phenomena and enables the exploration of innovative intervention strategies to reduce patient no-show rates in the complex health care system.

Research Question

The overarching research question was as follows: What managerial intervention strategies do healthcare administrators apply to reduce patient no-shows in order to increase business performance?

Interview Questions

1. What patient no-show intervention strategies have been most effective at your healthcare facility?
2. What makes these intervention strategies effective?
3. How do you measure the effectiveness of your patient no-show intervention strategies?
4. What challenges do patient no-shows pose at your healthcare facility?
5. What impacts do patient no-show rates have on the delivery of quality, comprehensive patient care?
6. What impact do patient no-show rates have on the business efficiency of your healthcare facility?
7. What additional information, not covered by the questions, would you like to share regarding patient no-show intervention strategies?

Conceptual Framework

The conceptual framework for this exploratory qualitative case study was the theory of planned behavior (TPB). The TPB links patient attitudes with their behavior (Ajzen, 1985). The TPB, designed by Ajzen (1985), is an extension of the theory of reasoned action (TRA) enabling researchers to predict and explain goal focused behavior (Carlson, Koenig, & Harms, 2013). Ajzen (1985) developed the TPB to improve the predictive power of the interrelated TRA by adding a segment of perceived behavioral control. Past behavior, trends are a highly accurate predictor of future behavior (Ajzen & Madden, 1986). The TPB correlates with other research measures to perceive behavioral

control (Ajxen & Madden, 1986). Researchers frequently use the TPB to explore the relations between attitudes, beliefs, behaviors, and behavioral intentions in various fields, including healthcare. The TPB consists of four major factors: (a) attitude toward the behavior; (b) subjective norm; (c) perceived behavioral control; and (d) intention, which all lead to the patients' behaviors (Ajzen, 1985). The body of knowledge that arises from the TPB assisted in the ability to explain the no-show patient phenomenon as related to the study. The TPB framework was beneficial to exploring what intervention strategies healthcare administrators use to reduce patient no-show rates. The TPB aligns best to what managerial intervention strategies healthcare administrators utilize to reduce patient no-show rates and provides a lens though which to explore the goals and planned behavior of healthcare administrators to reduce patient no-show rates.

Operational Definitions

Bailey-Welch scheduling method: The Bailey-Welch scheduling method allows healthcare facilities to double book patients for the first appointment of the day and then schedule the reminder of patients equally during the rest of the day (Welch & Bailey, 1952).

Health insurance portable and accountability act (HIPAA) of 1996: Congress enacted the HIPAA to protect the privacy and security of patient medical health records and information (U.S. Department of Health & Human Services, 2016). Medical staff can use and disclose patient medical health information only for specific purposes. Patients have the right to access and amend their patient medical health information (U.S. Department of Health & Human Services, 2016).

Iron triangle of health care: The iron triangle of health care, created by Kissick in 1994, balances the relationship between cost, quality of patient care, and the accessibility of patient care (Niles, 2015).

Lindley's recursion: Lindley's (1951) recursion is a queuing system with dependent interarrival and service times that includes alternating service systems and carousel storage systems as designed by Kendall (De Vuyst, Bruneel, & Fiems, 2014). The system shows the wait times for current and former patients in a single-server queue regarding the interarrival times between clients. The queuing system calculates data in order of patient appointment arrivals (De Vuyst et al., 2014).

No-show patient: No-show patients are patients who did not arrive for their appointments and did not cancel or reschedule their appointments within 24 hours of the original date and time (Huang & Hanauer, 2014).

Pay-for-performance (P4P) or Value-based purchasing (VBP): Pay-for-performance describes healthcare systems that reward providers, hospitals, and physicians for their efficiency (Niles, 2015). According to Niles (2015), pay-for-performance systems provide the highest quality of care for the lowest possible cost. The Agency for Healthcare Research and Quality works with CMS and the National Quality Forum, The Joint Commission, the National Committee for Quality Assurance, and the American Medical Association to implement and improve the P4P system nationwide (Niles, 2015).

Assumptions, Limitations, and Delimitations

There are certain assumptions, limitations, and delimitations to declare in the study. The explanation in this section reveals potential weaknesses in the study while offering readers the opportunity to validate the quality of the research material. I collected data by conducting semistructured interviews, recording observations, and taking field notes. The intention was to reduce the risk of bias by transparency, relevant conversations, and spontaneous participant response (Rubin & Rubin, 2012).

Assumptions

According to Marshall and Rossman (2016), assumptions are concepts believed to be true but not proven. There were five assumptions that may have affected the study. First, I assumed that the responses from each of the healthcare administrator participants during the interview process were complete and truthful. Second, I assumed that the participants' healthcare experience did articulate to the research and interview questions. The third assumption was that themes would emerge from the participants' interview responses that would align with the literature and provide research results. The fourth assumption was that the participating healthcare administrators would consider patient no-show rates a major contributor to inefficiency in a medical facility and the appointment scheduling process (Truong, 2015). The fifth assumption was creating a data collection plan would help mitigate the risks of personal bias influencing the results of the study.

Limitations

Kirkwood and Price (2013) defined the potential weaknesses in a study as the limitations of the study over which researchers do not have control. There are limitations in almost every type of study (Yin, 2014). This study had two limitations. First, a larger sample size would have been more reflective of patient no-show intervention methods (Anderson & Hartzler, 2014). The study had a sample size of four healthcare administrators in order to attempt to achieve data saturation as required for qualitative data collection (Fusch & Ness, 2015). Ideally, final sampling size can change as themes emerge and saturation is finally met (O'Reilly & Parker, 2013). Second, the short duration of the study added to the limitations of the study. Research conducted over a certain interval of time is only a snapshot of reality dependent on all conditions occurring during research period (Marshall & Rossman, 2016).

Delimitations

Delimitations are those characteristics limiting the scope and defining the boundaries of a study (Marshall & Rossman, 2016). Moreover, delimitations are within the control of the researcher. Delimiting factors include objectives, research questions, variables of interest, theoretical perspectives, and the population investigated (Marshall & Rossman, 2016). For the study, the first delimitation was the choice of the problem (i.e., that healthcare administrators may have limited strategies regarding ways to reduce patient no-show rates). Second, the delimitations of the research also included the study location and the sample size (Anderson & Hartzler, 2014; Yin, 2014).

Significance of the Study

According to Popple (2013), only 63% of healthcare administrators' track missed appointments, while just 46% implemented appointment cancellation and no-show policies. Previous literature focuses on patient no-show interventions, therefore leaving a gap in the exploration and identification of the reasons why certain healthcare administrators are more or less successful than others in reducing patient no-show rates (Cayirli & Gunes, 2013). The purpose of the study was to explore the gap in the literature. Healthcare administrators are in need of a more comprehensive understanding of the implications of patient no-show rates including how specific intervention strategies contribute to reducing patient no-show rates and improving patient access. Therefore, the study, including dissemination of the final results, was necessary to increase the awareness of the patient no-show phenomenon within the state of Hawaii and nationwide. In addition, the study results may also contribute to the body of knowledge on the patient no-show phenomenon. The target audience for the study results was healthcare administrators in Hawaii who currently are in decision-making positions at their healthcare facilities. Understanding the no-show phenomenon is the first step prior to developing successful strategies. Successfully reducing patient no-show rates may help lessen stressful situations for providers and healthcare administrators as a smooth patient flow contributes to better emotional health as well as career and organizational success (Flake, Barron, Hulleman, McCoach, & Welsh, 2015).

Contribution to Business Practice

The healthcare administrators' responses and identified themes from the interviews highlighted various patient no-show intervention strategies that healthcare administrators use successfully or unsuccessfully to assist patients to attend their appointments. If patient no-show rates decrease based on the described intervention, there should be a better patient flow (Zeng, Zhao, & Lawley, 2013). According to DuMontier, Rindfleisch, Pruszynski, and Frey (2013), patient flow directly correlates to revenue flow. A decline in patient no-show rates may also promote better patient health care access, resulting in more charges and revenue (DuMontier et al., 2013). An overall reduction in patient no-show rates can ultimately contribute to a positive business growth with the benefits spread to healthcare facility owners, staff, insurers, and patients (Berg et al., 2013).

Implications for Social Change

According to Ahmad, Metlay, Barg, Henderson, and Werner (2013), patients routinely keeping their appointments enjoy better health than those who do not attend their appointment regularly. An integral part of the healing process is for patients to receive excellent care from their provider (Guzek et al., 2014). Healthcare administrators and providers can educate their patients on the benefits of maintaining a healthy lifestyle, which includes keeping their clinical appointments (Rodriguez, 2013). Social and caseworkers play an integral role in patient satisfaction outcomes (Mani, Franklin, & Pall, 2015). According to Mani et al. (2015), social and caseworker's intervention lowered the no-show rate from 7% in the preintervention phase to 2% in the post

intervention phase (p = .009) in a healthcare research facility. The patient survey revealed a 91% satisfaction rate with the strategies used to reduce the no-show rate (Mani et al., 2015). The success rates to reduce patient no-show rates differ for each type of intervention strategy (Berg et al., 2013). According to Guzek et al. (2015), the reduction in patient no-shows provides more access to all patients because the patient no-show behavior affects all patients. Reducing no-show rates is a behavioral change benefitting the entire community (Ajzen, 2015). More healthcare access results in a healthier patient population, and a healthier patient population contributes to a positive social change in the community (Ajzen, 2015). If healthcare administrators improve their managerial intervention strategies to reduce patient no-show rates, the entire community may experience to a positive social change (Berg et al., 2013).

A Review of the Professional and Academic Literature

A thorough review of research studies identified several areas known to affect patient no-shows, including administrative strategies, scheduling, patient appointment reminders, the effects of patient no-shows on the quality of patient care, and the cost of patient no-shows. The literature review resources included the libraries of Walden University and the University of Hawaii online multidisciplinary research databases, including the following: (a) EBSCOhost and eBook Collection, (b) Academic Search Complete / Premier, (c) ScienceDirect, (d) ProQuest Central, and (e) Gale Virtual Reference Library. The search terms used included: *patient no-shows*, *appointment scheduling, quality of care, patient appointment reminders, patient satisfaction theory,* and *managerial strategies*. The web searches included government and professional

association sites as well. These association websites contained study related information on regulations and information regarding national health care expenditures and patient satisfaction. The sites searched included: (a) ACHE, (b) the Agency for Healthcare Research and Quality, (c) the National Institute of Health, (d) the World Health Organization , and (e) the Centers for Medicare and Medicaid Services.

The literature review included 220 journal articles, government websites, and books. All the journal articles used as resource references for the study were peer-reviewed with 89.9% published within five years of the Chief Academic Officer study approval. The earlier publications were essential to understanding the evolution of the healthcare system and the technology available to assist healthcare administrators in their quest to reduce patient no-show rates. The seriousness of the patient no-show problem revealed the need to gain a better understanding of historical no-show intervention methods. Keywords and phrases that guided the literature review were *patient no-show rates, patient no-shows, patient appointment scheduling*, and *theory of planned behavior*.

The organization of the literature review included three subheadings, the literature review opening narrative, the application of the applied business problem, and the relevance of the literature. Based on the problem statement and conceptual model, I used the literature review to explore various no-show interventions healthcare administrators use to reduce no-show rates. The influences affecting patient no-shows was the first topic included in the literature review. The main topic included several subtopics including patient no-show influences and clinic-specific influences. Added to the list of topics was the investigation of various managerial intervention strategies to reduce no-shows.

Several of the interventions depended on each other or included a combination of more than one strategy. For this reason, there were some overlapping statements and findings through the literature review. The information from the review of literature was essential during the development of Section 3 when the data from the research interviews revealed common themes for comparison with the findings of prior research studies. The purpose of the study was to explore the managerial intervention strategies healthcare administrators use to reduce patient no-show rates.

Theory of Planned Behavior

The conceptual framework for the study was the TPB. Ajzen and Timko (1986) found the TPB correlated highly with the attitudes and perceptions as related to specific health actions and patient behavior. Health factors such as patients' perceived vulnerability to illness, patients' relationship with their healthcare administrator and provider, and patients' gender have direct effects on patients' health-related behavior (Ajzen & Timko, 1986). The TPB includes frequent use to identify the patient health-related behavior, while only providing minimal guidance for changing the behavior (Fishbein & Ajzen, 2005). Healthcare interventions based on the TPB include the focus on patients not intending to perform the desirable behavior (Hobbis & Sutton, 2005). Hobbis and Sutton (2005) used the TPB as their conceptual framework theory to view behavioral managerial intervention strategies, norms, and control beliefs in their quest to change the behavior of their research participants.

Gauging patient no-show behavior might allow healthcare administrators to design more efficient managerial strategies and interventions to reduce no-show rates.

For example, Joseph, Daniel, Thind, Benitez, and Pekmezi (2014) used the TPB to examine the use of interventions to assess long-term maintenance of health behaviors such as physical activities, weight loss, and smoking cessation. The results of the current study added to the qualitative patient no-show research done to date and provided new data about the managerial intervention strategies used by healthcare administrators in the state of Hawaii. The study also documents suggestions and innovative ideas to reduce patient no-show rates.

Theories can provide an alternative lens to view and explore problem phenomenon. The complexity of the patient no-show phenomenon, however, provided rival theories which included the transformational leadership theory, health care utilization theory, trans-theoretical model, rationale choice theory, complexity theory, and the health belief model (HBM; McLean et al., 2016). The transformational leadership theory focuses on intellectual stimulation, inspirational motivation, individualized consideration, and idealized influences (Northouse, 2013). Transformational leaders often enforce organizational rules and norms while creating new strategies to change and improve organizations (Northouse, 2013). Although the transformational leadership theory meets the needs of business leaders, the theory did not include selection, because the theory does not allow for the diverse patient segment of the patient no-show phenomenon required in the study.

The health care utilization theory, developed in 1968 by Andersen, endured tremendous scrutiny until it was revised (Andersen 1995). The health care utilization theory is founded on the concept that health outcomes may affect the health belief of the

individuals (McLean et al., 2016). According to McLean et al. (2016), the health care utilization theory accommodates patient-centered research with patients as the research participant population. The health care utilization theory was not included in the selection of the study because no patients participated in the study.

DiClemente (1977) developed the trans-theoretical model to assess an individual's willingness to take corrective action with the implementation of new healthier behaviors (Prochaska & DiClemente, 2005). The trans-theoretical model takes the patients through the five constructive actions, stages of change, processes of change, self-efficacy, decisional balance, and temptations (Prochaska & DiClemente, 2005). However, since the trans-theoretical model includes patients, it was not appropriate for the study.

The rationale choice theory predicts the outcomes and patterns of specific choices related to an individual's behavior (McLean et al., 2016). According to Charki, Josserand, and Boukef (2016), the rational choice theory includes a foundation of economic principle stating that individuals with self-interest will always make logical decisions and their decisions will provide them with the most benefit given the choices available. The rational choice theory was excluded from use in the study since it focuses on an individual's goal-orientation and does not address group behaviors that would be concerning in a clinical setting (Charki et al., 2016).

The complexity theory design originated in the 1960s and helped researchers study complex systems in the field of strategic management and organizational studies (Chandler, Rycroft-Malone, Hawkes, & Noyes, 2016). According to Chandler et al.

(2016), the complexity theory includes interdisciplinary ideas that examine uncertain and nonlinearity phenomena, focusing on organization change rather than the changes employees may manage within the organization. The focus of the current study was to explore the managerial intervention strategies healthcare administrators used to reduce patient no-show rates rather than the organization's reaction. Consequently, the complexity theory did not meet the needs for the study.

The HBM often becomes a theory when discussing patient behaviors such as the patient no-show phenomenon (Gerend & Shepherd, 2012). Geiger (2015) is an example of a study using the HBM as the conceptual theory to investigate the underlying causes of patient no-shows at an urban hospital-based outpatient clinic in the United States. According to Geiger, no-show rate reduction improves appointment scheduling and therefore reduces patient waiting times and increasing patient satisfaction. The HBM illustrates the prediction of behavior changes based on a person's beliefs and perceptions, focusing on value and expectancy, while also predicting an individual's compliance with attending their scheduled medical appointments (Clark & Janevic, 2014). The HBM was a consideration for the study, but the HBM would provide a focus on the behavior of patients only, excluding the role of healthcare administrators. It was therefore found to be unsuitable. Gerend and Shepherd (2012) found in their study, when comparing the HBM to the TPB, the TPB frequently supports health care research. The TPB links patient attitudes with their behavior. Ajzen (1985) developed the TPB to improve the predictive power of the interrelated TRA by adding a segment of perceived behavioral control. Past behavior trends are a highly accurate predictor of future behavior (Ajzen & Madden,

1986). The TPB correlated with other research measures to perceive behavioral control (Ajxen & Madden, 1986). Researchers frequently use the TPB to explore the relations between attitudes, beliefs, behaviors, and behavioral intentions in various fields, including the health care field. The TPB consists of four major factors: (a) attitude toward the behavior; (b) subjective norm; (c) perceived behavioral control; and (d) intention, which all lead to the patients' behaviors (Ajzen, 1985). Different managerial intervention strategies make use of the TPB to influence patient intentions and actions, and it is important to note that a need may exist for different techniques for different health care problem phenomena (Ajzen & Fishbein, 2004; Fishbein & Azjen, 2005).

The *attitude* toward the behavior indicates a patient's favorable or unfavorable view of keeping an appointment (Guzek et al., 2015). Attitude encompasses the patient's emotional response to the provider's recommendation and education on the importance of appointment compliance (Berg et al., 2013; Guzek et al., 2015). A positive attitude would likely improve appointment attendance, while a negative attitude may potentially yield an increase in patient no-show rates (Berg et al., 2013; Guzek et al., 2015).

The *subjective norm* represents the perceived social pressure to perform or not perform a behavior (Ajzen, 1985). The subjective norm influences patient beliefs and motivation to attend their appointments (Berg et al., 2013; Guzek et al., 2015). For example, patients are more likely to get a colonoscopy if they feel they are at risk of developing colon cancer (Patel et al., 2016). Healthcare administrators and providers explaining to their patients the benefits of attending their appointments (e.g., preventing a

disease from spreading by detecting it early) may reduce patient no-show rates (Guzek et al., 2015).

Perceived behavior control is the essence of the actual behavior and the expectation of success for performing the behavior (Ajzen, 1985). The act of controlling the beliefs concerning the presence or absence of obstacles or facilitators to discourage or encourage behavioral performance are essential components of perceived behavioral control (Ajzen, 1985). Healthcare administrators may design managerial strategies to remove the obstacles preventing patients from attending their appointments; for example, reduce delay in appointments (Guzek et al., 2015). According to Ajzen (1985), the TPB perceived behavioral control and the behavioral intention might predict a patient's behavioral achievement. Achievements in reducing patient no-show rates are possible when perceived behavioral control creates a positive influence on the patient's intentions (Ajzen, 1985).

The *intention* was an indication of the willingness of patients to attend their scheduled appointments regularly (Kong, Li, Liu, Teo, & Yan, 2015). The higher the intention, the more likely patients will attend their appointments (Cayirli & Gunes, 2013; Kemper, Klaassen, & Mandjes, 2014; Kong et al., 2015). No-show patients' intentions depended on the amount of money they had, the time they had to attend their appointments, and the communication between the patient and the healthcare provider (Cayirli & Gunes, 2013; Feldman, Liu, Topaloglu, & Ziya, 2014; Kong et al., 2015).

Role-play, interactive questioning, and learned mastery experience are examples of TPB managerial intervention strategies to promote patient behavioral change (Ajzen,

2015). According to Clouse, Williams, and Harmon (2016), healthcare administrators participating in a patient no-show research study need to specify when, where, and how they plan to perform any intended managerial intervention strategies. The TPB also allows healthcare administrators to plan the behavior of patients (Ajzen & Sheikh, 2013). The exploration of the successfulness and unsuccessfulness of current managerial intervention strategies to reduce patient no-show rates adds to the existing research literature.

Influences Affecting Patient No-Shows

High patient no-show rates cause mental strain on healthcare providers and administrators (Deledda, Moretti, Rimondini, & Zimmermann, 2013), as well as a need for additional staff to enforce intervention strategies (Guzek et al., 2015). Requiring this additional workforce contributes to the already expensive healthcare system (Guzek et al., 2015; Samuels et al., 2015). In addition, patient no-shows do not help to reduce patient appointment waiting times (Popple, 2013). Patients who cancel their appointment, or just do not show up, disrupt the provider's schedule (Samuels et al., 2015). Personnel managing outpatient clinics struggle to fill empty appointment slots without adequate notice, while other patients cannot secure an appointment time of their choice.

The average no-show rates in the United States varied from 15% - 30% in general medicine clinics and urban community centers but could be as high as 50% in some primary care clinics (Davies et al., 2016). According to Berg et al. (2013), if a clinic had an 18% no-show rate, the corresponding loss of annual revenue was 16.4%. No-show rates above 25% destabilized patient care (Davies et al., 2016). According to Popple

(2013), patients who miss appointments did not reschedule, resulting in reduced quality of their follow-up care for chronic health conditions. This decision put the patient's health at risk and created stressful situations when patients tried to reschedule (Oakley, LeGarde, & Patel, 2013). According to Kaplan-Lewis and Percac-Lima (2013), the two most common reasons for patient no-shows are miscommunication and forgetfulness. Bhise et al. (2016) conducted a study and found additional reasons for patient no-shows include: (a) no transportation (8.3%), (b) illness and change in health status including hospitalized (11.1%), (c) financial constraint (11.1%), (d) stress (8.3%), (e) weather conditions (2.8%), (f) patient does not want to miss work (14%), (g) forgetting appointments (38.9%), (h) difficulty contacting the call center, (i) procedural factors, (j) cognitive-emotional factors, (k) appointment scheduling time problems, and (l) child care issues.

Demographic Influences on Patient No-shows

Research on patient no-show interventions, which considered sociodemographic factors provided a door to identifying the potential cause of why patients did not keep their appointments (DuMontier et al., 2013). Guzek et al. (2015) found that pediatric patients exhibit no-show behavior significantly less than adult patients. For patients with chronic medical conditions, those with mental health problems demonstrate some of the highest average no-show rates at 50% (Guzek et al., 2015). DuMontier et al. (2013) found that of the 141 patients who participated in the study, 2% accounted for 17% of the total missed appointments. Medical subspecialty patients were more likely not to show for their appointment than surgical subspecialty patients (Sah, Fagerlin, & Ubel, 2016).

Although, no-shows in pediatric subspecialty were common, costly, and preventable (Perez et al., 2013). Perez, Ntaimo, Malave, Bailey, and McComack (2013) found clinical no-shows caused both lost opportunities for provider-patient interaction and serious financial loss to the healthcare system.

Age, minority status, Medicaid use, and income were all significant factors used to identify potential no-show patients (Percac-Lima et al., 2015). Public insurance (Medicare and Medicaid) patients have higher no-show rate than patients with private insurance or self-paying (Perez et al., 2013). According to Downing et al. (2016), foreclosures contributed to patients' poor health and financial strain. Foreclosure caused stress, homelessness, mental health problems, and patients often lost their jobs and health insurance (Downing et al., 2016). Therefore, foreclosure indirectly contributed to higher patient appointment no-show rates (Bauer, Baggett, Stern, O'Connell, & Shtasel, 2013).

Patients with closer travel distance to their appointment had fewer appointment no-shows, while less travel time by bus also correlates with patient no-show performance (Miller, Chae, Peterson, & Ko, 2015; Percac-Lima et al., 2015). Strothman, Scherzer, Phillips, and Stukus (2015) studied how the distance patients traveled to their appointments affected their ability to keep their appointments. Strothman et al. (2015) found that the residency of 83% of the no-show patients was within 15 miles of their healthcare facilities while patients' having more than 180 miles to travel to their appointments had a 60% no-show rate (Strothman et al., 2015). Ethnic and race minorities have a higher rate of no-show for their medical appointments (Shimotsu et al., 2015). Cheng, Huang, Tsang, and Lin (2014) evaluated 12 variables predicting

schizophrenia patients missing their first appointment at a clinic in Taiwan. Those missing their appointments included a high probability of being male, had frequent alcohol abuse habits, received antipsychotic medication at discharge, and had a higher rate of discharge against medical advice (Cheng et al., 2014). According to Cheng et al. (2014), age at onset of illness, family history, marital status, involuntary or voluntary hospitalization, some previous hospitalizations, years of education, age, or lengths of hospital stay, were not significantly different between the two groups.

Clinic-Specific Influences

As previously noted, a variety of reasons exists for the occurrence of patient no-shows. Healthcare administrators also contribute to a rise in no-show rates by scheduling errors, double scheduling, and neglecting to remove patients after cancellation (Wang & Fung, 2014). Traditional managerial intervention strategies strive to control patient no-show behavior, but all interventions improved efficiency and the overall quality of patient flow (Guzek et al., 2015). Clinic-specific patient no-show influences are within the control of healthcare administrators (Guzek et al., 2015).

Clinic Cancellation Policy

Designing an acceptable clinic cancellation policy and mastering appointment scheduling is essential to reduce the risk from the healthcare administrator's perspective (Popple, 2013). A patient no-show policy is the first step in developing an intervention strategy to combat patient no-shows (Norris et al., 2014). Healthcare administrators can implement a policy to inform patients of the consequences for late cancellations or not keeping their scheduled appointments (Popple, 2013). Without a clinic cancellation

policy and patient no-show criteria, there is no managerial strategy in place (Popple, 2013). The policy should clearly define no-show appointment criteria and cancellation timeframe (Popple, 2013). Healthcare administrators should enforce the clinic cancellation policy uniformly and give special consideration only under defined circumstances (Popple, 2013).

Educating patients on how this issue influences the practice can bring awareness to the issue. If patients face no consequences for their no-show behavior, there is little to no motivation for them to change their behavior (Popple, 2013). Patients may require annual reminders about the clinic cancellation policy and no-show criteria (Popple, 2013). Patients would then acknowledge the policy as part of acceptance for care by the clinic (Popple, 2013). Healthcare administrators can also include a termination-of-care policy in their clinic cancellation policy (Popple, 2013), to include the ability to dismiss the chronic no-show for more than three no-shows in one year (Norbash et al., 2016). Terminating a patient relationship is a sensitive issue because patients do not always have alternative care options (Norbash et al., 2016). Appendix A provides an example of a clinic cancellation policy including patient no-show criteria. Billing and scheduling systems and electronic patient health records play an integral part in providing the necessary information for healthcare administrators to design managerial strategies (Popple, 2013). Trends and issues contributing to the patient no-show problem could surface from such data (Popple, 2013). Providers need an analytical strategy to understand group-level and provider-specific trends (Popple, 2013). The analytical reports could show: (a) no-show type, (b) appointment reminder type, (c) insurance type,

(d) date of appointment, (e) the day of the week, (f) time of the day, (g) visit type, and (h) patient identification number (Popple, 2013). A tracking process could also use this computerized management system to track a patient's activity (Popple, 2013).

Using codes to alert medical staff of patient activity including no-show codes help to predict the risk of the patient not keeping their appointment when they call to schedule one (Popple, 2013). This coding system aligns with the TPB by assisting healthcare administrators to predict and plan for a patient's no-show behavior, and healthcare administrators adopt managerial intervention strategies to alleviate no-show appointments and cancellations (Popple, 2013). Without a well-defined clinic cancellation policy, healthcare administrators are at risk of having serious patient and healthcare administrative conflicts (Popple, 2013). If the clinic does not have a clinic cancellation policy, misunderstandings occur, resulting in unnecessary conflicts when patient no-show appointments happen (Popple, 2013). Clear appointment cancellation guideline can only contribute to better quality of care and accessibility (Popple, 2013).

Appointment Scheduling

Unused patient appointments at outpatient clinics are a growing concern in the healthcare delivery system (Lotfi & Torres, 2014). Patients who do not keep their appointments cause inefficient use of resources and reduce clinical capacity optimization rates (Chandra, 2015). The patient no-show phenomenon occurs more frequently when patient panel sizes are larger, and providers cannot provide timely healthcare access (Chandra, 2015; Turkcan et al., 2013). The length of wait time for patient appointments

has an influence on patient no-show rates: the longer new patients wait for their appointments, the higher the risk of not attending their appointment (Bard et al., 2014).

O'Neill et al. (2012) explored the scheduling process at a medical center and found efficient scheduling and easy access to medical appointments positively affect the quality of ambulatory patient care. Wait time between phoning in and receiving the first available appointment decreased (O'Neill et al., 2012). In addition, prompt telephone responses and courteous service at registration improved the scheduling process (O'Neill et al., 2012). Reduced access time meant that patients received an appointment with a healthcare provider within three working days of the request (O'Neill et al., 2012).

De Vuyst et al. (2014) explored appointment scheduling using an analytic approach to computation complexity. Using Lindley's recursion, the team found that patient wait time has a strong influence on patient no-show rates (De Vuyst et al., 2014). O'Neill et al. (2012) used monthly mystery call shoppers in their patient scheduling study. The mystery shoppers collected data using standardized forms, rated the quality of service, and recorded their interactions with schedulers (O'Neill et al., 2012). The shoppers charted and discussed the outcomes with clinical leaders and healthcare administrators while recommending solutions to detect problems (O'Neill et al., 2012). Eighteen months after the start of the intervention study, scheduling staff improved their registration skills from 60% to over 90% (O'Neill et al., 2012).

Designing the next generation of software could identify patients' preferences and assist the appointment booking decisions of medical staff (Wang & Fung, 2014). Adopting an appointment system with patient preferences reduced patient no-show rates

(Wang & Fung, 2014). Allowing patients to book their appointment with their preferred provider, as well as having a suitable appointment time, was critical (Chen & Robinson, 2014). Healthcare administrators could also evaluate the time of day patients receive their appointment as a means of reducing no-shows (Chang, Sewell, & Day, 2015; Feldman et al., 2014; Finkelstein, Liu, Jani, Rosenthal, & Poghosyan, 2013; Liu, 2016; Norris et al., 2014; Percac-Lima et al., 2015). Previous studies note that Monday (24.7%) as the single best day to schedule an appointment. Sunday (16.2%) and Saturday (15.5%) are the second and third most favorable days to schedule an appointment (Schmalzried & Fallon, 2012). No-show rates also vary by the time of the day, with patients more likely to keep their appointments between the times of 9:00 am and 4:00 pm (Ellis, Wiseman, & Jenkins, 2015). Zacharias and Pinedo (2014) found spreading out appointment and procedures, rather than front-loading a scheduling system is more beneficial to patients as well as providers. Moreover, Zacharias and Pinedo quantified the impact of appointment time on no-show rates; patients attended their appointments more often on Thursdays, while Fridays had the highest no-show rate of the weekdays (Wiesche, Schacht, & Werners, 2016). Schedulers group the week into three categories: (a) Monday, Tuesday, and Wednesday; (b) Thursday and Friday; and (c) Saturday and Sunday to improve scheduling options to patients (Kong et al., 2015). When patients arrive late for their appointments, there is additional uncertainty for staff members (Kong et al., 2015).

Appointment scheduling in an outpatient clinic involve providers, patient, and clinical support staff (Tsai & Teng, 2014). Sequential booking, random arrivals, no-shows, varying degrees of urgency, healthcare provider availability and patient

preferences all provide optical to efficient scheduling (Tsai & Teng, 2014; Yan, Tang, Jiang, & Fung, 2015). Ideally, appointment scheduling balances the interests of patients with the requirements of providers (Kemper et al., 2014). Patients may prefer scheduling staff to plan long intervals between patient appointments, because this strategy may reduce their wait times if physicians encounter an emergency with another patient (Izady, 2015). Appointment scheduling staff must be flexible to accommodate emergency patient arrivals and treat these cases quickly (Erdogan & Denton, 2013).

The Bailey-Welch appointment schedule method allows appointment-scheduling staff to double book that first appointment of the day, while evenly spacing the remaining patients through the rest of the day (Morikawa et al., 2015; Welch & Bailey, 1952). The goal of this plan is to offset the adverse effect of patient no-shows and patient tardiness (Kuiper & Mandjes, 2015; Oh, Muriela, Balasubramaniana, Atkinsonb, & Ptaszkiewiczb, 2013). Strothman et al. (2015) compared patient no-show rates for three different months at different times of the year and found no-show rates were 24.7% in October, 26.0% in January, and 24.3% in May. Referral and waiting times for appointments proved to be statistically significant when comparing patients who kept their appointments (median 128 days, interquartile range 68/421) and those who did not (median 146 days, interquartile range 119e448, $p < .001$) (Strothman et al., 2015). Patient appointment intervals affect patient no-shows dramatically, and the timing of the appointment is the easiest issue to address (Norris et al., 2014). Clinicians and staff should consider scheduling as a higher level of the administrative task with specialized training requirements (Kuiper & Mandjes, 2015; Luo, Kulkarni, & Ziya, 2015).

Providers' Contribution to Patient No-Shows

Patient no-show behavior can contribute to providers having a negative attitude toward their no-show patients and result in an antagonistic patient-provider relationship (Klassen & Yoogalingam, 2013). A weak relationship between a provider and patient can lead to less communication, lack of empathy, decrease the quality of care, and even create a higher no-show rate (Klassen & Yoogalingam, 2013). The stereotype stigma attached to no-show patients could lead providers who do not accept patients with a high risk of not keeping appointments (Klassen & Yoogalingam, 2013).

DeFife, Smith, and Conklin (2013) studied patient no-show rates in a psychotherapy clinic and found vacant appointments contribute to financial burdens, reduced scheduling efficiency, and lower effectiveness of therapeutic service deliveries. They explored more specific clinical process factors relating to why patients miss their appointments (DeFife et al., 2013). Several factors contribute to consistently low no-show rates for certain providers, which included keeping their patients motivated, develop a positive therapeutic alliance, set a treatment plan, and communicate about no-show concerns during the treatment process to maintain accountability (DeFife et al., 2013).

High no-show rates contribute indirectly to delays in getting an appointment the same day (Liu & Ziya, 2014). A shortage of primary care providers currently exists in the United States, and high no-show rates add additional pressure to these practices (Brislen, Dunn, Parada, & Rendon, 2016). Physicians often lack the satisfaction that should be part of a healing profession (Liu & Ziya, 2014). An increasing number of physicians reported

burnout, depression, poor self-care, and even substance abuse (Casalino & Crosson, 2015). Establishing adequate provider-patient relationships also contributes to the success of a patient's preventative care and disease management regimens (Kim et al., 2015; Lee, Heim, Sriskandarajah, & Zhu, 2015; McNeil, Gormley, & Binder, 2013). Patients have expectations when meeting with their healthcare provider, and if physicians do not meet the patients' expectations, it negatively influences their motivation towards follow-up appointments (Deledda et al., 2013). When evaluating various intervention methods, clinicians remove themselves from the problem because they often see their only task as providing patient care (Musen, Middleton, & Greenes, 2014). Gijo and Antony (2014) explored workflow processes concerning patient-provider familiarity and appointment compliance to improve continuity of care making use of Lean Six Sigma methodologies. Healthcare providers prefer to have minimum idle time and limit overtime pay (Feldman et al., 2014). Recommendations included corrective actions, and the implantation of the managerial intervention strategies reduced the patient waiting time from 57 minutes to less than 25 minutes (Gijo & Anthony, 2014).

Patient No-Show Managerial Intervention Strategies

Healthcare revenue systems, reimbursement systems, and funding opportunities remain complex (Berg et al., 2013; Liu & Ziya, 2014). The consequence of this complexity is healthcare facilities and organizations expect their administrative staffs and providers to manage tight budgets and efficiently coordinate limited resources (Saure & Puterman, 2014). Patients who do not keep their appointments cause inefficient use of resources and reduce optimal clinical capacity (Flake et al., 2015). The patient no-show

phenomenon occurs more frequently when patient panel sizes are larger, and providers cannot provide timely access to care (Chandra, 2015; Turkcan et al., 2013). Patient satisfaction increases if the minimal wait time for appointments occurs (Liu & Ziya, 2014). The length of wait time for patient appointments also influences no-show rates (Berg et al., 2013). The longer new patients wait for their appointment, the higher the risk of not keeping it (Bard et al., 2014). Patient no-show behavior is a deeply entrenched problem in the healthcare delivery system (Campbell et al., 2015).

Prompt appointment scheduling and healthcare service may serve to validate the quality of patient care (Bodenheimer, Ghorob, Willard-Grace, & Grumbach, 2014). Medical personnel who manage outpatient clinics often have to struggle to fill empty appointment slots without adequate notice, while other patients cannot secure an appointment at the time required (Liu & Ziya, 2014). The inability to receive timely medical care detracts from the patient's overall experience (Friedberg et al., 2014; Soeteman, Peters, & Busari, 2015). Therefore, it makes business sense to create strategies that will improve the overall patient satisfaction including proper scheduling which includes reducing no-show rates.

Rising patient cancellations and no-show rates contribute significantly to rendering medical resources unavailable and reducing revenue for hospitals (Kheirkhah et al., 2016; Tabish & Nabil, 2015). According to Berg et al. (2013), if a clinic has an 18% no-show rate, the corresponding annual revenue loss is 16.4%. The national average no-show rate in the United States is between 15% to 30% in a general medicine clinic and urban community centers, but no-show rates can be as high as 50% in some primary care

clinics (Davies et al., 2016). Patients missing appointments will often not reschedule, resulting in a delay in their follow-up care for chronic health conditions (Liu & Ziya, 2014). This decision puts the patient's health at risk and creates a stressful situation when she or he or tries to reschedule (Oakley et al., 2013).

Interventions

According to Popple (2013), there is a need to develop specific managerial strategies and interventions to counteract the effects of patient no-show focus on overbooking. The managerial intervention strategies include the different patient appointment reminders and the controversial administrative fee charged for patient no-shows. The purpose of the study was to discover successful and unsuccessful as well as new managerial interventions strategies aimed at reducing patient no-shows.

Overbooking

General patient appointment scheduling problems contribute to difficulty in receiving a timely appointment (McMullen & Netland, 2015; Wang & Fung, 2015). The most common intervention is overbooking, which has not been shown to be a successful intervention for patients, providers or organizations (Bard et al., 2014; Norris et al., 2014). Automated reminder phone calls, staff reminder telephone calls, postcard reminders, direct cell phone calls, short message service (SMS) text messaging, e-mail reminder messages, double booking no-show patients, booking patient on different days of the week, releasing no-show patients, and administrative charges for patient no-shows are means of addressing and altering no-show rates (Clouse et al., 2016; Percac-Lima et al., 2015). Although using an overbooking strategy can improve revenue and clinical

resource utilization, limited evidence exists documenting overbooking strategy as a positive contributor to lowering no-show rates (Liu & Ziya, 2014). Overbooking means the clinic's computer software will show the provider's time as overbooked with the patient's average no-show rate (Huang & Hanauer, 2014; Schuetz & Kolisch, 2013). For example, if a healthcare provider has 10 appointments in the morning and an average of two no-shows, the clinic could schedule 12 patients to compensate for potential no-shows (Huang & Hanauer, 2014). The goal of clinical patient overbooking is to reduce the negative influence of patient no-shows on clinical operations and efficiency (Zeng et al., 2013), but instead, the process inconveniences patients and providers (Oh et al., 2013; Parizi & Ghate, 2016). Providers may also have to work overtime or stay longer to provide service to overbooked patients (Bard et al., 2014; Tang, Yan, & Cao, 2014) and according to Berg et al. (2013), this strategy does not help to increase clinical revenue. Overbooking works around the problem by loading more work onto the already strained provider's schedule (Anderson, Zheng, Yoon, & Khasawneh, 2015; Kortbeek et al., 2014).

According to Popple (2013), creating codes specifically for no-show appointments to differentiate between types of cancellations and rescheduling can help scheduling staff to identify chronic no-show patients who may call to schedule an appointment. The rationale is that if a significant number of patients cancel the same day, the codes will indicate that patients cannot make timely appointments with their providers (Popple, 2013). If a patient has a frequent 24-48 hour cancellations codes in the patient

chart, schedulers can identify the patient noncompliance to the clinic cancellation policy rather than an appointment access problem (Popple, 2013).

Open-Ended Access

Open-ended access means that clinics offer patients same-day appointments regardless of the urgency of their medical condition (Qu et al., 2012). According to Qu et al. (2012), scheduling method does not require advance follow-up appointments, overbooking, or postponing appointments and the process allows additional access to accommodate patient needs. Open-ended access depends on supply and demands and the patient-provider ratio while clinic administrators can predict demands based on trends, such as a particular month, week, day, or appointment time (Qu et al., 2012).

There are numerous advantages of an open-ended appointment access scheduling methods for the patient. These include: (a) patients enjoy the ability to see a provider when needed, providing for excellent continuity of care between patient and provider (Qu et al., 2012); (b) open-ended access saves patients from costs associated with emergency room visits; and (c) health care visit accessibility may allow patients with severe health problems to see a doctor earlier, resulting in an increase in patient satisfaction (Nuti et al., 2015). The benefits for the office include the time-saving for the administrative staff as the process reduces the need to send patient appointment reminders and most significant is a decrease in provider and staff work stress, resulting in better care to the patients (Qu et al., 2012). However, the transition to open-ended access could be difficult initially because patients may only want to see their usual provider and in certain circumstances,

the process may create on overload of urgent care appointments while creating a backlog of patients and increasing wait times (Lee et al., 2013).

Walk-in Patients

No-shows and cancellations represent 31.1% of scheduled appointments, and 32.2% of scheduled time (Moore, Wilson-Witherspoon, & Probst, 2001). Walk-in patients can replace 61.0% of the lost appointments, but only 42.4% of the time held for each no-show appointment (Moore et al., 2001). Walk-in visits generate 89.9% of the income associated with regularly scheduled appointments, resulting in a total revenue shortfall over the year of 3%-14% (Moore et al., 2001).

Primary care clinics have a consistent flow of walk-in patients to fill the vacant no-show patient slots, serving as an excellent source of revenue (Cayirli & Gunes, 2013). Cayirli and Gunes (2013) found walk-in patients are generally from a lower socioeconomic class and have a perception of urgency when seeking medical care. Many primary care healthcare facilities adopt overbooking as an intervention against patient no-show rates and late cancellations, but research indicated that accepting walk-ins is much more efficient than overbooking (Qu, Rardin, & Williams, 2012). Overbooked patients can still no-show, but walk-in patients continue to wait to be seen (Liu & Ziya, 2014).

Houghton, Casey, Shaw, and Murphy (2013) completed a hospital-based post-surgery study of single-session walk-in counseling and found that walk-in patients significantly reduce the cost of no-shows. The ease of accessibility that walk-in appointments provide to patients could help them recover faster from surgical and nonsurgical procedures (Houghton et al., 2013) as well.

Live Clinic Staff Appointment Reminder Calls

A personal telephone call from a clinic staff member is the most expensive of the possible interventions, but this strategy is more cost effective than allowing a 30% no-show rate to continue (Lima, Maciel, Silva, & Guimaraes, 2014). Reminding patients by telephone one day before their appointment increased the number of patients who arrived (Fudemberg et al., 2016). Patients can address physician instructions for their appointments and reschedule their appointments, rather than not coming (Lima et al., 2014). When a patient is on the phone with scheduling, most patients take the opportunity to reschedule at the same time (Lima et al., 2014). With a live appointment reminder calls, there is no need for patients to call back to reschedule appointments (Weatherston & Gue, 2014).

Automated Appointment Reminder Call Systems

Current technology contributes to an easier and inexpensive strategy to remind patients about appointments (Finkelstein et al., 2013). Communication methods are varied, and a combination of reminders may prove to be the most efficient (Finkelstein et al., 2013). An automated appointment reminder call is one of the standard practices scheduling use to remind patients of their future appointments (Goyal, Sehgal, & Sehgal, 2015). However, there are challenges with the use of automated reminder phone call systems since these messages may not reach patients or patients ignore the call because automatic reminders are not personal (Molfenter, 2013).

A more personal reminder occurs when the clinic staff calls the patient directly a few days before the appointment. Sending a short text message is another way to speed

up the process of reminding patients (Goyal et al., 2015). Staff reminder calls and SMS text message reminders lead interventions against patient no-show rates. Al-Aomar and Awad (2012) found texted reminders could reduce no-show rates from 10%-20%. Although SMS appointment reminders are impersonal, these reminders contribute to the decrease of patient no-shows (Molfenter, 2013).

E-mail Appointment Reminders and Medical Portal Patients

The cost effectiveness of telemedicine will have far-reaching consequences on healthcare expenditure in both the United States and globally (Tabish & Nabil, 2015). Telemedicine continues to progress and will make a considerable impact on no-show rates in the future (Norris et al., 2014). Traveling and travel delays contribute to no-shows rates (Van Dieren, Rijckmans, Mathijssen, Lobbestael, & Arntz, 2013). Telehealth requires minimal travel and allows providers to schedule multiple patients with ease (Kruse, Bolton, & Freriks, 2015). According to Kruse et al. (2015), telemedicine will grow in the future, as patient portals already contribute to healthcare improvement outcomes (37%) self-management of disease, disease awareness, better medication adherence, increased preventative medicine, decreased office visits, and improved the quality of care and patient satisfaction. The patient no-show phenomenon will have less influence when removing traveling as a reason for patient no-shows with the use of telemedicine (Van Dieren et al., 2013).

SMS Reminders

Approximately, 90% of adults in the United States own a cell phone, and 58% of those phones are Smartphones with easy access to the Internet (Arora et al., 2015).

According to Zallman, Bearse, West, Bor, & McCormick (2017), 95% of their research study patient participants had access to text messaging, and text message reminders were preferred rather than e-mail, phone, and reminder postcards. Therefore, SMS becomes an effective method to reduce patient no-show rates (Blumberg & Luke, 2013). The benefits of mobile technology include cost, the electronically programmed service, and the ability to contact patients on their cell phones to help administrators track data (Adedokun, Idris, & Odujoko, 2016; Lin & Wu, 2014). Cellphone ownership has no boundaries, and phone ownership is similar across many demographics (Wang et al., 2014; Weaver, Ellis, Denizard-Thompson, Kronner, & Miller, 2015). Cellphone text reminders continue to increase in popularity as technology improves (Huang et al., 2013; Narring et al., 2013; Thakkar et al., 2016). In 2008, 51% of patients used mobile phones, compared to 70% in 2011 (Perron et al., 2013). SMS messages are the least invasive of the appointment reminder strategies available, and the least demanding resources (Perron et al., 2013). Low income and less-educated individuals, who known to have higher rates of no-shows exceeded a rate of 84% mobile phone ownership (Weaver et al., 2015). Text messaging may be a promising patient-centered approach in providing appointment reminders to patients and reduce patient no-show rates (Zallman et al., 2017). For this population using text, reminders can be a reasonable solution to decreasing no show rates.

An increase in cell phone and other mobile communication devices make SMS text messaging the most popular method of reminding patients about upcoming appointments (Gurol-Urganci, de Jongh, Vodopivec-Jamsek, Atun, & Car, 2013). According to Deng (2013), SMS appointment reminders in a healthcare setting

substantially increased attendance for clinical appointments. Text message reminders are a straightforward and practical option for health care services to improve their service (Deng, 2013). The service is a cost effective strategy that also provides health benefits for patients, because using the technology may help patients regularly attend their appointments (DeSouza, Rashmi, Vasanthi, Joseph, & Rodrigues, 2014). Text messaging includes additional benefits in the future to request, for example, that a patient goes for lab tests (Perron et al., 2013).

Patient No-Show Administrative Charge

Healthcare administrators implement fees for services that health insurances do not cover. These charges include missed appointment fees, which can range from $30 to $50 (Oakley et al., 2013). Healthcare administrators and providers who charge no-show fees are in the minority, but the numbers continue to grow (Oakley et al., 2013). Healthcare administrators use the charge to offset the rising costs of practicing medicine, although the cost of a no-show patient is much higher than $50 (Oakley et al., 2013). Clinic overhead can run 65% or more of the total revenue; more healthcare providers continue to leave their practices because of not making a profit (Oakley et al., 2013).

Healthcare administrators started with frequent no-show patients when assessing an administrative no-show fee (Oakley et al., 2013). Charges for no-show appointments are not a traditional intervention method (Popple, 2013; Oakley et al., 2013). Oakley et al. (2013) noted that healthcare administrators use the following eight steps before they implement an administrative no-show charge:

1. Make sure managed care insurance contracts, and government agencies do not prohibit a no-show charge.
2. Clearly, define a cancellation policy for any no-show charge.
3. Medical staff must have a communication protocol, including scripts for providers and staff.
4. Develop a protocol for potential challenges to the policy.
5. Assess clinical risks for refusing to care for frequent no-show patients.
6. Develop a policy for the collection of patient no-show charges.
7. Assess the medical billing system's ability to accommodate for charging an administrative no-show charge.
8. Develop a protocol for providers to end their relationship with repeat, no-show offenders.

When healthcare facilities and clinics charge administrative no-show fees, the organization must ensure the staff communicates these regulations to all new patients in their no-show policy (Popple, 2013). In the year 2010, one academic outpatient dermatology clinic was facing a 25% rise in no-show rates, which resulted in the implementation of a patient no-show fee policy (Oakley et al., 2013). The cost for a patient no-show appointment was $50 (Oakley et al., 2013). The implementation of the fee reduced the unused appointments by 10%, and no-show rates dropped from 25% to 15% (Oakley et al., 2013). The impact of patient no-show rates is more evident in outpatient specialty clinics that do not offer walk-in patient appointments (Cayirli & Gunes, 2013; Moore et al., 2001).

No-show patients create a tremendous burden on the clinic overheads and healthcare provider time (Friedberg et al., 2014). If health care facilities bill patients directly, the patient is liable for the administrative no-show costs because health insurance carriers do not assume responsibility for charges not associated with healthcare service (Oakley et al., 2013). The intervention is most effective when patients sign a no-show policy warning them about the potential administrative no-show fees (Popple, 2013). Patients not satisfied with the no-show charge are primarily patients with the highest no-show rate and may be asked to find another provider if they are unable to attend their scheduled appointments (Popple, 2013). Although the administrative no-show charge is very unpopular with patients as well as providers, this intervention method could reduce no-show patients substantially (Popple, 2013). United Kingdom hospitals have a no-show rate of 12% for outpatient appointments (Powell & Appleton, 2012). Missed outpatient appointments cost the United Kingdom health system an estimated £600 million per year (Powell & Appleton, 2012). In the United Kingdom, the influence of patient no-shows is so large that if clinics reduce the rates by one-tenth, the annual cost healthcare cost will decrease by £68 million (Powell & Appleton, 2012). In addition to reducing health care cost, improvements in patient appointment attendance reduce health risks for patients, which does not only affect patients in the United Kingdom but worldwide (DeFife et al., 2013; Paige & Mansell, 2013). Powell and Appleton (2012) found that factors such as age, gender, and transportation logistics play a significant role in patient no-show rates. Booking efficiency and staff-patient relationships influence patient appointment attendance from a provider's viewpoint

(Powell & Appleton, 2012). The most inexpensive way to reduce patient no-show rates is to modify the appointment allocation strategy in a clinic (Ellis & Jenkins, 2012). Psychological research studies showed that different days of the week evoke distinct emotional responses (Ellis & Jenkins, 2012). The emotional tone brightens from Monday to Friday (Ellis & Jenkins, 2012). Ellis and Jenkins (2012) hypothesized that attending a medical appointment may place additional burdens on patients (missing work, transportation logistics, or confronting a worker's unpleasant attitude). Psychological reasons for patient no-shows are fear of bad news, fear of unpleasant treatment, and a negative relationship with medical personnel (Ellis & Jenkins, 2012).

Effects of Patient No-show on the Quality of Patient Care

Patient no-shows may lead to worse quality of care for patients, the inefficient use of clinical personnel, an increase appointment waiting times and hospitals may implement intervention strategies, such as overbooking, which does fix the no-show phenomenon (Hallsworth et al., 2015). It is essential that nurses and healthcare administrators work together defining metrics, tracking no-show rates, and reporting the results (Liu & Ziya, 2014). Patient satisfaction increases if little or no waiting time for appointments occurs (Liu & Ziya, 2014). Prompt appointment scheduling and healthcare service may validate the quality of patient care (Bodenheimer et al., 2014). If patients cannot receive, timely medical care, there is a potential for a reduction in overall quality of care (Friedberg et al., 2014; Soeteman et al., 2015). According to Moore et al. (2001), patients missing appointments without canceling could jeopardize their health and well-being, as well as interfere with their providers' therapeutic efforts. Intermittent care can

often lead to other unexpected, costly forms of medical care, such as urgent care centers and emergency rooms (Norris et al., 2014; Samuels et al., 2015).

Providers found it difficult in designing an efficient patient care plan for patients with high no-show rates (Molfenter, 2013). No-show patients do not follow through with their healthcare plan or disease preventative plan (Sorita, Funakoshi, Kashan, Young, & Park, 2014). Molfenter (2013) found that no-shows adversely affect clinical outcomes and reduce healthcare productivity. Patient-centered scheduling contributes to improving the quality of care to patients by building an alliance between appointment schedulers and patients (Long, Sakauye, Chisty, & Upton, 2016). Patient appointment attendance improves when building harmonious provider relationships and shared responsibilities with patient populations, thereby improving clinical treatment goals and outcomes (McNeil et al., 2013). Specific patient-centered changes that healthcare administrators should consider focusing on can include shortening appointment wait times, training appointment schedulers to respect and respond to patient preferences, providing phone reminders 48-hours before appointments, use mail appointment reminder cards, in addition to providing clinic information (including maps and directions) (Cruz et al., 2013; Stein et al., 2014).

The Cost of Patient No-Shows

No-shows for appointments waste valuable clinical resources and cost agencies income (Moore et al., 2001). Raising patient cancellations and no-show rates contribute significantly to cause a void of medical resources and reduce revenue for the hospital (Kheirkhah et al., 2016; Tabish & Nabil, 2015). Every time a patient is a no-show for an

appointment, the medical facility loses money not likely to recuperate (Berg et al., 2013). Primary care facilities can deal with the no-show phenomenon easier because they normally get many walk-in patients during the day (Yan et al., 2014).

Specialty medical facilities have a difficult time because they do not accept walk-in patients (Cayirli & Gunes, 2013). These facilities work on a referral system, and a specialty consultation requires some special tests such as x-rays and lab results for specialists to evaluate to assist them in their diagnosis (McMullen & Netland, 2015). The new patient ratio for specialty consults is much higher than primary care medical facilities (McMullen & Netland, 2015). New patients have a higher no-show rate, especially if they have extended delays before their appointments (McMullen & Netland, 2015). If patients wait too long for an appointment, the patients typically try to get an earlier appointment with another provider or specialist (McMullen & Netland, 2015). Some of these patients neglect to cancel their original appointment (McMullen & Netland, 2015). The only alternative for specialty facilities is to overbook patient appointments with the historic no-show rate (McMullen & Netland, 2015).

Since 2005, the integration of electronic medical records systems provides a much more efficient tracking system for patient no-show rates (Lam, Lee, & Chen, 2016). An electronic patient medical records system contributes to the patient no-show intervention process, and it is possible to formulate computer algorithms to predict no-shows (Kuiper, Kemper, & Mandjes, 2015; Lam et al., 2016). The cost of electronic medical records is expensive, but the benefit significantly outweighs costs and disadvantages (Bardhan & Thouin, 2013).

Guedes, Leite, and Baptista (2014) found the main excuse for no-shows is confusion and illness. Moreover, Guedes et al. suggested healthcare practitioners take action to help patients overcome their confusion through education initiatives aimed at improving attendance outcomes. Healthcare providers that educate their patients on the importance of follow-up care for improved health outcomes may also experience a lower no-show rate (Robinson & Reiter, 2016). Healthcare administrators use automated call reminders service, staff telephone call reminders, and SMS text messaging or imposing an administrative fee if patients do not arrive for their appointments (Finkelstein et al., 2013). Berg et al. (2013) examined the patient no-show phenomenon and concluded that no quick fix to the problem exists.

An effective patient no-show intervention system needs multiple interventions: patient education and clinic cancellation policies are only beginning to address the problem (Popple, 2013). The no-show problem is costly enough to allocate financial and human resources (HR) to reduce no-show rates (Guzek et al., 2015). Healthcare administrators often underestimate the value of patient scheduling systems as an intervention to reduce patient no-show rates (Liu & Ziya, 2014). A combination of interventions, education, and better accessibility would limit no-shows to an acceptable level (Ho, 2014).

Transition

Section 1 provided the foundation, background, problem statement and purpose statement, while the literature review provided insight on all aspects surrounding patient no-shows. Section 1 provided an overview of the seriousness patient no-show rates

present for the healthcare system. In addition, Section 1 included the different patient no-show intervention strategies that healthcare administrators use to reduce no-show rates. The literature review included an examination of the influence patients and clinics have on patient no-show rates. Managerial intervention strategies included discussions as it pertains to scheduling, patient appointment reminders systems, and patient no-show administrative charges. The literature review concluded with a discussion of the effect no-show patients have on the quality of patient care and the cost of patient no-shows.

Section 2 includes a detailed explanation of the study: research exploration, study configuration, and data collection strategy. Section 3 includes the study's findings compared to other peer-reviewed studies from the literature. Applications to professional practice, implications for social change, recommendation for action, recommendations for future research, reflection, and a conclusion comprises section 3.

Section 2: The Project

For this qualitative case study, I explored the managerial intervention strategies of healthcare administrators using semistructured interviews, organizational documents, and field note observations. Gathering this information may benefit clinical operations by helping administrators understand the potential cause of patients neglecting to keep their scheduled appointments and to gain knowledge in mitigating those causes. The results of the study can assist in determining if healthcare administrators accurately inform their patients of their appointment cancellation policies, as well as unveil the impact patient no-shows have on appointment scheduling and healthcare facilities' fiscal sustainability.

Purpose Statement

The purpose of this exploratory qualitative single case study was to explore healthcare administrators' intervention strategies to reduce patient no-show rates. The targeted research population was active ACHE, Hawaii-Pacific Chapter healthcare administrator members. Healthcare administrator ACHE members all have operational healthcare administrative and supervisory experience (ACHE, 2016). I collected data from four volunteer healthcare administrators in Honolulu and neighboring Hawaiian Islands. Reducing patient no-show rates may indirectly result in healthcare organizations operating more efficiently and better provider utilization, and ultimately provide more healthcare accessibility (Friedberg et al., 2014). An increase in efficiency may result in more profitability (Dabholkar, 2015). In addition, if healthcare facilities increase efficiency and profitability, patients may receive more healthcare access to medical treatment within a reasonable time, without driving up health care costs (Guzek et al.,

2015). Sharing data and results from this study may contribute to an improvement in social well-being and increase healthcare access to patients in the culturally diverse healthcare delivery system of the Hawaiian Islands (Higgins et al., 2015).

Role of the Researcher

The researcher is instrumental in collecting and processing data in a qualitative study (Yin, 2014). My role as a researcher was to explore and gather information regarding managerial intervention strategies healthcare administrators use to reduce patient no-show rates. According to Anney (2014), researchers should respect the rights of participants and avoid bias in every stage of the research. The goal of this study was to reduce personal bias by remaining cognizant of the temptation to interject my views and to control my emotions during the analysis phase of the study. The strategies to mitigate potential biases included withholding preconceived knowledge and opinions during the conduct of the research. Researchers need to identify and manage biases to ensure not to influence the research participants during their replies to the interview questions (Malone, Nicholl, & Tracey, 2014). According to Malone et al. (2014), researchers might reduce biases by identifying and containing their opinions while assembling and analyzing the data on their research topics. Although I am a member of the ACHE with more than a decade of healthcare administrative and patient no-show intervention experience, I did not share my patient no-show intervention opinion and mitigated any biases by not having any direct report relationship with any of the research participants or their health care facilities. Researchers with extensive experience in the topic of research might

encounter some unusual experiences resulting from the different functions assigned to them during their research (Rubin & Rubin, 2012).

Researchers face ethical challenges during every stage of the qualitative research process (Barker, 2013). Therefore, I addressed the research participants respectfully and treated participants as autonomous agents. The participants' diminished autonomy entitled them to protection as per the Belmont Report. The Belmont Report includes a foundation based on personal respect, beneficence, and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). The participants received adequate information in the interview protocol (see Appendix B) to inform them of the voluntary nature of the study.

The role of the researcher is to maintain rigorous adherence to the ethical guidelines, alleviate the risk biases, secure research information, and conduct research on a topic of their research interest (Simundic, 2013). Anney (2014) recommended triangulation to ensure the quality and credibility of a study. I used an interview protocol to conduct the open-ended question interviews, in a consistent manner (see Appendix B). Interview protocols describe the expectations of the interviewer and help build a relationship with the interviewee, while the protocol also helps organize the use of the open-ended questions (Platt & Skowron, 2013). The benefits of the study may positively affect all patients independent of their racial minority, social, ethnic, sociodemographic status or their health insurance contributions.

Participants

Purposeful sampling allows researchers to gather information from small sample sizes to achieve an accurate and in-depth account of a participant's personal experience (Anderson & Hartzler, 2014; Cleary, Horsfall, & Hayter, 2014). The four research participants included in the study had healthcare administrative experience dealing with patient scheduling and patient no-show intervention strategies. The study participants worked with appointment cancellation policies, and they were part of a decision-making team at their healthcare facility. Cleary et al. (2014) stated further that researchers could gain a significant understanding from what they term as information-rich cases by conducting open-ended questions during interviews with a small number of participants who have knowledge about the central research question under exploration.

Fischer et al. (2013) used purposeful sampling to gather information from a subset of 27,802 show and no-show patients who take one of three medications prescribed from a large multispecialty group practice. Gielen, Krumeich, Havermans, Smeets, and Jansen (2014) used purposeful sampling to understand why treatment staff clinicians working in an addiction care facility do not implement an integrated treatment plan for their post-traumatic stress disorder and substance use disorder patients. I purposefully selected healthcare administrator participants working in health care facilities located in Hawaii.

The target healthcare administrative participants had experience with healthcare administrative strategic planning and participated in the decision-making processes. Their clinical locations provided healthcare administrative service to a diverse patient population to give an accurate reflection of the no-show patient population. I protected

the participant's confidentiality by encrypting information such as participant names, employee identification number, and any protected health information the participants disclosed during the conduct of their audiotaped interview.

The research participants received a solicitation letter inviting them to participate in the study (see Appendix C). The letter included an explanation of the purpose of the study, as well as a consent form, which included a description of the participant's rights under the Belmont Report. In accordance with the Belmont Report guidelines, the participants were informed of any monetary consideration, the process to withdraw from this study, and disclosure of how their confidential information will remain secure during the conduct of the research. The participants agreed to have their interviews audiotaped. The process for enrollment included volunteering for the study and meeting the study selection criteria. Interviews with the participants occurred outside of their healthcare facilities or at a location where the participants felt comfortable. Electronically storing the audiotapes, transcripts, and appointment cancellation policy documents for 5 years after the conclusion of the study met the research requirements of the National Institutes of Health (NIH) and the institutional review board (IRB) at Walden University. After the 5-year storage period, I will hire a HIPAA certified destruction company to destroy all the study data.

Marshall and Rossman (2016) purported that semistructured interview questions will evoke the participant's views and opinions from their lived experience. Berg, Loddenkemper, and Baca (2014) conducted semistructured interviews with parents whose children encountered a delay in the diagnosis of epilepsy. The aim of their

research was to understand how delays in treatment affect children's intellectual development. Berg et al. (2014) further noted how many clinics implement access measurements in their appointment scheduling process, such that specialty care patients can receive, in some cases, same-day, or the next third-day appointment with a physician at the onset of a seizure. During the interview process, I used a semistructured, open-ended interview method with open-ended questions to help identify the managerial intervention strategies healthcare administrators employed to facilitate the lowest patient no-show rates. The goal was to strive to build a positive relationship with the participants. The semistructured interview method coupled with the personal nature of the open-ended questions motivated the participants to provide full and honest answers to the interview questions.

Research Method and Design

The research design I selected was an exploratory qualitative single case study. The choice of this methodology met the needs of this study to understand healthcare administrators' responses to the patient no-shows phenomenon. The qualitative research method allowed me to analyze interview data for common themes healthcare administrators used in their managerial interventions strategies. Synthesis, interpretation, evaluation, categorization, and comparison of the data may allow healthcare administrators to find new interventions that could help in reducing patient no-show rates and ultimately improve both patient care and profitability for health care facilities. I adjusted the interview questions when a participant's response suggested the need for

additional lines of inquiry because of a change in body expression, mood, or voice inflection (Doody & Noonan, 2013).

Research Method

Consideration for this study included qualitative, quantitative, and mixed research methods to conduct the study. In research studies, the researchers determine the best study method to explore the research phenomenon they research (Yin, 2014). Quantitative researchers strive to test theories by investigating the relationship between variables (Vance et al., 2013). According to Vance et al. (2013), the quantitative method requires the incorporation of data, statistical analysis, and closed-ended questions. The quantitative method was not included as a research method selection because the method did not include exploration of the perceptions and experience of research participants.

Mixed-method research studies is a combination of qualitative and quantitative methodology with the benefit of gathering both multiple participant viewpoints, as well as the hard factual data (Caruth, 2013; Marshall & Rossman, 2016). Despite the mixed methods promising features, the method is complicated and is beyond the scope, timetable, and cost consideration for this study. Additionally, the mixed-method does not include the exploration of perceptions and experience of the participants for the quantitative section of the mixed-method. As a result, the quantitative and mixed methods were not suitable for the study.

Qualitative research is of particular value to management, because of the focus on describing and explaining human interactions, meanings, and processes that take place in organizational and home environments in a natural setting (Yin, 2014). DuMontier et al.

(2013) conducted a similar qualitative study to learn why patients have difficulty in keeping their scheduled appointments while delving into their lives to find out the struggles their patient's face in managing their daily life. I selected the qualitative method of exploration to gain a clear understanding of how patients maintain a history of keeping their appointments. The intent of the study was to build an understanding of the potential causes of no-shows and discover procedures to assist patients in attending their scheduled appointments.

A qualitative method of inquiry contrasts with quantitative methods whereas, in the quantification, researchers generalize the findings to the population using survey instruments or tests (Marshall & Rossman, 2016). Surveys or experiments would not have provided a framework for healthcare administrators to describe, their experiences in depth with the phenomenon of patient no-shows. The purpose of the study was to understand the decision-making process of healthcare administrators when they implement intervention strategies to change the behavior of no-show patients to attend their appointments regularly. Qualitative methods are useful in providing rich descriptions of complex data by constructing or developing themes to understand the patient no-show phenomenon (Yin, 2014).

Research Design

Researchers conduct reviews of methods to determine the alignment between research questions, method, and design (Yin, 2014). The study included consideration regarding phenomenological, ethnographic, narrative and case studies. The research designs vary with the variety of information collected, as well as the scope of the data

collection. Phenomenological researchers strive to gain an understanding of the research phenomenon and explain how efficiency can improve in an organization (Bowden & Galindo-Gonzalez, 2015). I did not select a phenomenological design because the goal was to explore managerial intervention strategies to improve patient no-show rates.

Ethnographic researchers strive to gain a better understanding of the corporate culture, which can improve the operational flow in an organization (Lopez-Dicastillo & Belintxon, 2014). The corporate organizational culture does not align with the specific patient no-show phenomenon. I did not select an ethnographic design because the goal of this study is in exploring intervention strategies to reduce patient no-show rates.

Narrative researchers' record and report stories of their participants' life experiences (Hampshire, 2014). The patient no-show phenomenon, not personal experience, but rather experience gain over years of dealing with the phenomenon. I did not select the narrative research design because of the interest in exploring the managerial intervention strategies healthcare administrators use to reduce patient no-show rates rather than personal life experience.

Researchers who use the case study design may provide in-depth exploration results of complex social and technical phenomena related to the reduction of patient no-show rates (Yin, 2014). Additionally, researchers prefer to select case studies when they explore phenomena, asking *how* or *what* questions (Bloomberg & Volpe, 2012; Yin, 2014). Case studies have three research design types: (a) exploratory, (b) descriptive, and (c) explanatory (Bloomberg & Volpe, 2012; Yin, 2014). Case study locations may be a

single organization or several organizations if a comparative case study is preferred (Bloomberg & Volpe, 2012; Yin, 2014).

I selected a single case study versus a multiple-case study design because the exploration includes one organization in Hawaii. According to Yin (2014), a single case design is best when the researcher's goal of the exploration is to understand a unique case originating from several viewpoints. Marshall and Rossman (2016) stated the case study design allows researchers to analyze data, identify patterns, and connect themes to discover relationships, analyze multiple forms of information, and interpret outcomes. The cases study method is similar to a naturalistic inquiry, yet this approach consists of a more structured process using interviews of key informants, field note observations, and other documents, for example, appointment cancellation policies (Yin, 2014). Yin (2014) recommended researchers should use the case study research method to describe, explain, and explore their research participant's experience and perceptions.

The study sample size of four healthcare administrator participants provided sufficient information on patient no-show intervention strategies to achieve data saturation (Yin, 2014). According to Yin (2014), the use of multiple data sources and data, analysis increase the accuracy of the data interpretation and saturation. Rinder et al. (2012) used a case study design to reduce scheduling time and understand patient no-show behavior. Multiple sources of evidence and the need to explore such information to gain an understanding of the patient no-show phenomenon make utilizing a case study design appropriate because the case study method will provide significant data to research data saturation and develop a detailed account of the no-show phenomenon.

Marshall and Rossman (2016) suggested that open-ended interviews are the underpinnings of a case study. According to Rubin and Rubin (2012), open-ended questions and semistructured interviews may provide a deeper understanding of the healthcare administrators working experience in their natural environment. I conducted open-ended questions interviews to explore healthcare administrators' thoughts and experience with the phenomenon of patient no-shows. Conducting interviews in an organized and comfortable environment will ensure the participants feel safe in providing their honest feedback (Merriam & Tisdell, 2016). Open-ended question interviews allowed me to present the questions naturally, and record the participant's responses as they recount their lived experience. The semistructured open-end interview method provided the participants the opportunity to express themselves fully with explanations of their recollection of events.

The use of multiple data sources allowed me to utilize a theoretical lens with a different perspective when viewing participant feedback and opinions. Researchers selecting a narrative design have to embed themselves into the daily life's of their research participants', over a long-term period, and the participants have to relive their past experience (Bloomberg & Volpe, 2012; Yin, 2014). The narrative design was not suitable for the study because the participants were not no-show patient and therefore were not be able to tell stories of their no-show history.

According to Marshall and Rossman (2016), the ethnographic design explores principles of groups, and there is no correlation to the phenomenon of patient no-shows. An explanatory qualitative single case study research design was the most appropriate

design for this study of managerial intervention strategies healthcare administrators uses to reduce patient no-show rates.

Population and Sampling

The population for the study was four healthcare administrative members from the ACHE Hawaii-Pacific Chapter. The Hawaii-Pacific Chapter of the ACHE includes the Hawaiian Islands, Guam, and American Samoa (ACHE, 2016). Marshall and Rossman (2016) stated researchers conducting qualitative studies might use 1 to 4 participants to gather information depending on the complexity of the phenomena. The best measure is to ensure enough participants volunteer for the research to yield a reasonable distinct amount of data for saturation (Bloomberg & Volpe, 2012).

The number of participants in a research study needs to ensure enough data is retrievable to understand the research phenomena and enable data saturation (Fusch & Ness, 2015). The sample size met the requirements of the selected design to understand the managerial intervention strategies healthcare administrators use to reduce patient no-show rates. Participants complied with the criteria for participation indicated on the inform consent form. The perspectives of the healthcare administrators, combined with the secondary appointment cancellation policy documentations and my observations during the interviews, provided significant triangulation of data to gain a deeper understanding of the managerial intervention strategies healthcare administrators uses to reduce patient no-show rates.

The sampling frame was healthcare administrative members of the ACHE Hawaii Pacific Chapter. The healthcare administrators were a true reflection of the diverse

cultural population in the Hawaiian Islands. The selection of the research sample frame was a major factor because different cultures view the no-show patient phenomenon differently (Deville et al., 2013). Members of the ACHE have to earn the minimum of a graduate degree with more than 2 years' supervisory experience.

During the study, I used purposeful snowball sampling as the research participant recruitment method. There are 16 different types of purposeful sampling, and the snowball sampling method is one of them (Palinkas et al., 2015; Perez, Nie, Ardern, Radhu, & Ritvo, 2013). The snowball sampling method allowed the participants to help in the recruitment of additional volunteer research participants. To begin the sampling process, recruited ACHE healthcare administrators with patient no-show intervention experience via a solicitation letter of invitation (see Appendix C). When the four healthcare administrators volunteered to participate, I did not need to rely on the participants to recruit some of their colleagues to join the study. The Hawaiian community of healthcare administrators are a close community, and the purposeful snowball sampling method proved ideal for the study. The purposeful sampling method allowed me to send out participant recruitment letters to recruit participants to volunteer for the study. The purposeful sampling method is a non-probabilistic sampling procedure selecting participants from a target study population based on the target groups' alignment with the purpose of the study and the overarching research question (Anderson & Hartzler, 2014; Emerson, 2015).

Purposeful snowball-sampling gathering of information from the healthcare administrative research participants striving to improve their patients' appointment

attendance increased my knowledge of the best combination of patient no-show interventions. The potential research participants did receive a solicitation letter of invitation by e-mail and postal mail to participate in the study (see Appendix C). The criteria to participate in the study were: (a) active members of the ACHE, (b) healthcare administrative strategic planning and decision-making experience, (c) extensive experience with the patient no-show phenomenon, and (d) full-time employees in a healthcare administrative position.

Cleary et al. (2014) maintained that purposeful sampling is a strategy in which researchers use to obtain data from information-rich cases. I selected the initial participants for the study by using the purposeful sampling method, but the snowball sampling method could have added additional participants. Fischer et al. (2013) used purposeful sampling to gather information from a subset of 27,802 show and no-show patients, who take one of three medications prescribed from a large multispecialty group practice. Gielen et al. (2014) used purposeful sampling to understand why treatment staff clinicians working in an addiction care facility do not implement an integrated treatment plan for their posttraumatic stress disorder and substance use disorder patients.

Marshall and Rossman (2016) maintained that the concept of data saturation includes the foundation on the participants answering the open-ended research questions completely enabling the researcher to answer the central research question. Yin (2014) suggested that data saturation occurs when no more developing themes arise during the data analysis. Marshall and Rossman (2016) suggested researchers could adopt a control model to show the exact interview when data saturation occurred. For instance,

researchers can conduct a minimum of four interviews and then initiate three more until no new themes emerge.

Ethical Research

Yin (2014) stated a research study must conform to an acceptable code of conduct, social adaptability, and legal requirements. Marshall and Rossman (2016) concluded that the increasing use of technology brought potential ethical considerations not experienced by past theorists (Finkelstein et al., 2013). For instance, software programs designed to use speed coding of the participant's transcripts are in demand to aid qualitative researchers in their analysis of data (Marshall & Rossman, 2016). Storing data electronically, and the use of software applications, pose a potential threat to the participant's privacy (Bloomberg & Volpe, 2012). Technology has the potential for intruders to break into the applications and additionally, data housed on a secured network server will never disappear (Finkelstein et al., 2013; Liu, Musen, & Chou, 2015). Consequently, I used a desktop computer rather than a laptop computer, further reducing the risk of theft of the participant's data. The thought to participate in a qualitative research study depends on a participant's willingness to share his or her experience, despite potential risks (Yin, 2014). The participants did not experience any discomfort in reliving suppressed memories. I mitigated this concern and protected the participants' confidentiality to the best of their ability.

In the study, participants signed a consent form, which included a description of the informant's rights under this research. The participants received no compensation for their participation in the study. The participants were able to withdraw from the study at

any time. The informed consent form provided the participants with a confidential agreement for the study (see Appendix D). All information were secure during the research process, and no information was disclosed to reveal the identity of the health care facilities or research participants. None of the study participants refused to answer any of the questions.

Ahmad et al. (2013) used audio tapes to record open-ended interviews from four participants to understand how hospitals could reduce its re-admission rate and no-show appointment problems. Hayman, Wilkes, and Jackson (2012) advised their researchers to number the participant's interview audiotape to protect their identification. Consequently, I did audiotape the interviews on an encrypted recording device. Interviews with the participants did occur outside of the clinic or at a location of the participant's choice to protect their identity. Securely storing these audiotapes, transcripts, and study documents for 5-years after the conclusion of the study will meet the requirements of the IRB at Walden University. After that, an HIPAA certified destruction company will destroy all data. Walden University IRB approval was obtained for the study before the interview data collection began. The approval number assigned to this study was 02-03-17-0315107. I completed the training for Protecting Human Subject Research Participants by NIH Training on Human Participants and received the ethical approval number 2259236, to conduct research.

Data Collection Instruments

Marshall and Rossman (2016) mentioned that researchers are the most important instrument because of their role as the primary collection tool used to gather data. An

interview transcript, audio recorder, and open-ended question interviews are also instruments that allow researchers to collect information (Bloomberg & Volpe, 2012). According to (Merriam and Tisdell (2016), interview transcripts and audio recorder are necessary for allowing participants and researchers to understand their central research question and related sub questions better. I kept the study interview questions as an interview transcript during the semistructured interviews (see Appendix D).

Irvine, Drew, and Sainsbury (2013) used open-ended question interviews to show that telephone interviews are a viable means to collect qualitative data. Berg et al. (2014) conducted open-ended semistructured interviews from parents whose children encountered a delay in the diagnosis of epilepsy. The semistructured, open-ended question interviews encouraged the research participants to share their experience and knowledge as it relates to their patient no-show intervention methods and strategies to change no-show patient behavior. Marshall and Rossman (2016) suggested that the process of member checking shows the research evidence are credible. Member checking occurs when researchers solicit feedback from their participants to make sure that the interpreted data was accurate (Harvey, 2015).

Pillai, Bhangu, Narayanan, and Yoong (2012) used member checking to understand if the interval between sending appointment reminders and the patient's actual appointment reduces patient no-shows' occurrences. Pillai et al. stated that when patients do not attend their scheduled appointment, inefficient utilization of resources for the clinic occur, and subsequently affects other patients who cannot obtain medical treatment when needed. I demonstrated the study credibility through triangulation of data and

member checking techniques ensuring my evaluation was accurate and credible. I used an interview guide organizing and maintaining the large amount of data collected during the study research period. Fischer et al. (2013) used an interview guide to direct the conduct of their research to understand what factors contribute to patients failing to complete their ordered laboratory or screening tests. The researcher treated the raw data with confidentiality and sharing of raw data with other outside researchers or revealing confidential information in the appendices of the study did not occur. The purpose of the study was to protect the anonymity of the health care facilities and the research participants. The researcher used protective codes and themes while only analyses of coded data appeared in the results.

Data Collection Technique

Date collections occurred during four interviews by asking and collecting answers to seven semistructured, open-ended questions (see Appendix F). The advantage of using open-ended questions was to minimize variable participant responses (Marshall & Rossman, 2016). Using of the semistructured questioning approach provided the flexibility to explore the patient no-show phenomenon in more depth and gather enriched participant responses (Yin, 2014). The disadvantage of using the semistructured approach is that this technique may be resource intensive and time-consuming, requiring additional skills to analyze the obtained data from the recorded semistructured interviews to prevent influences from the researcher (Bloomberg & Volpe, 2012).

Bredart, Marrel, Abetz-Webb, Lasch, and Acquadro (2014) presented comprehensive guidelines to assist researchers to achieve optimal interviewing results

and quality. Bredart et al. (2014) outlined the importance of preparing for interviews, the researcher's choice of the interview environment, the researchers interviewing skills, and interviewing training. Additionally, Bredart et al. (2014) defined qualitative research interviews, as the scientific research process where researchers communicate verbally to collect information regarding their specific research aim. According to Bredart et al. (2014), a researcher's specific listening skills may positively impact information provided by the interviewee during the interview process. Following IRB and Walden University approval, the research participants were identifying and scheduling for interviews. Appointment interviews were scheduled, contacting participants a week before, and participants received a reminding e-mail a day before the interview. Participants had the right to confidentiality, and they could withdraw from the study at any given time.

The study followed the interview protocol by asking the same questions to each of the four participants (see Appendix D), in addition the background of the study and an explanation of the purpose and procedures of the study were presented to the participants. Before the interview, I provided the participants with a detailed explanation of the confidentially and voluntary nature of the study, face-to-face interviews and/or video conference interviews, and the data collection process. During the face-to-face or telephone conference interviews the open-ended questions provided an organized, comfortable environment to ensure the participants felt safe in providing their honest feedback. The open-ended question interviews allow researchers to present issues naturally and record the participant's responses as they recount from their healthcare

administrative experience (Yin, 2014). Most importantly, this process allowed participants the opportunity to express themselves fully and expand their representation of events. According to Bloomberg and Volpe (2012), repeating the same questions to each of the participants during the interviews will minimize the variation in the responses.

Additionally, I followed a strong sense of obligation to prevent and minimize any potential harm to the participants and maximized their possible benefits. The four participants received the same treatment during the study, and each participant received the same questions and time to respond to the questions. The research participants did not experience any physical risk during the study; they were welcome to withdraw from the study at any time.

Although healthcare administrators were awareness of the informed consent documents, I was also available to explain and answer any questions. Verification of information from research participants ensures the credibility of the record information (Merriam & Tisdell, 2016). Therefore, I reviewed each study participant's contribution with them to ensure the credibility of the recording.

Member checking and triangulation of the data were strategies used to ensure the validity of the study findings. According to Koelsch (2013), member checking is an interactive process between the researcher and participants when collecting data to achieve the specific research aims and maintain a relatively higher level of accuracy using revisiting facts, prior experiences, feelings, and beliefs. According to Archibald (2015), triangulation is a collaborative strategy to ensure validation of data results.

Marshall and Rossman (2016) maintained that establishing a process of data triangulation will indicate the findings are credible.

The researcher used member checking after each interview completion. During member checking, I shared and reviewed sections of the research interview with each study participants individually to ensure the accuracy of the report. Member checking occurs when researchers solicit feedback from their participants to make sure that the interpreted data was accurate (Koelsch, 2013). Boblin, Ireland, Kirkpatrick, and Robertson (2013) suggested that the process of member checking shows the evidence is credible.

Pillai et al. (2012) used member checking to understand if the interval between sending appointment reminders and the patient's actual appointment reduces patient no-shows' occurrences. When patients do not attend their scheduled appointment, inefficient utilization of resources for the clinic occurs, and subsequently affects other patients who cannot obtain medical treatment when needed (Pallai et al., 2012). I demonstrated credibility through triangulation of data and member checking techniques to ensure the study evaluation was accurate and credible.

The collection of multiple sources of data, such as the appointment cancellation policy documents and interviews with multiple healthcare administrators from multiple organizations ensure triangulation for qualitative researchers (Burau & Andersen, 2014). The interview process included an interview protocol (see Appendix D), which served as the guideline for the semistructured interviews and collection of the associated data for triangulation purpose. I used interviews, appointment cancellation policy documents, and

the literature to ensure validation of the study through multiple lenses. Rather than conducting a pilot study, the participants were encouraged to maintain clarity of the questions during the interview process. Multiple data sources, such as open-ended question interviews, documents, and field note observations form the basis to gain insight into the behavior of no-show patients and the counteracting intervention behavior of healthcare administrators in Hawaii. Yin (2014) suggested that with triangulation, researchers gather evidence from several sources of data, which supports the same theme, versus merely evaluating several sources of data independently.

Data Organization Technique

The study data was organized to ensure ease of interpretation and confidentiality. Audiotape recordings, taking notes to document observations and reviewing health care facility appointment cancellation policies were used to collect data from the research participants during the interviews. The organizing of data is important when using multiple data sources (Lee, 2014). The study participants were assigned a unique code, and the data was analyzed for similar themes, the relationship between the conceptual framework and literature review. Data organizing systems are important when interpreting research data ((Bloomberg & Volpe, 2012). I kept the research data in a secure facility for 5 years after which data destruction will occur.

Data Analysis

The sample size of four healthcare administrators provided sufficient data to achieve data saturation (Fusch & Ness, 2015). According to Yin (2014), the accuracy of data interpretation increase when the researchers use multiple sources of data and data

analysis together. Included as multiple data sources interview questions, note-taking, and a review of health care facilities appointment cancellation policies were included in the study. Multiple sources were used to analyze the data including methodological triangulation of the data, member checking, identifying similar themes, and applying the study conceptual framework (Bloomberg & Volpe, 2012). Data triangulation was the type of triangulation most suitable for the study.

According to Bloomberg and Volpe (2012), data gathered from research interviews may require analysis and coding to determine if similar themes emerge among the study participants' experience and the research study. The collected research data and the analyzed study findings contributed to a better understanding of the specific business problem that some healthcare administrators lack the experience and skills to implement effective managerial intervention strategies to reduce patient no-show rates. The transcription of information is essential to reduce accuracy problems with interpretation and validity (Bloomberg & Volpe, 2012).

According to Stringer (2014), standard research protocols requirements include that researchers categorize and code the data in a way that reflects the perspectives of the participants. I used text analysis to interpret the meaning of the data as opposed to a software program. The text analysis method requires a review of the data collected from the open-ended interview questions to look for similar words, phrases, and themes (Stringer, 2014). According to Bloomberg and Volpe (2012), assignment of different codes for the themes, phrases and similar words are essential to the text analysis method. Research participants should also be assigned unique identifiers to ensure confidentiality

and easy interpretation (Bloomberg & Volpe, 2012). As the final step, I followed a review of the themes and aligned them to the TPB, the literature review, and the appointment cancellation documentation. The reviewing of the research results through different lenses support the identification of different managerial intervention strategies and themes that are reflective of the participating healthcare administrators experience with patient no-show interventions and the literature (Merriam & Tisdell, 2016). Organizing, developing, coding, and analyzing data, in accordance with qualitative research guidelines are the foundation of case studies (Stringer, 2014). The coding, themes, interpretation and explanation of the data supported the overarching research question for the study.

Reliability and Validity

According to Brutus, Aguinis, and Wassmer (2013), there is more emphasis on reliability and validity when conducting research studies. If a study is reliable, the study results and finding allow other researchers to repeat the study and obtain similar results (Brutus et al., 2013). According to Marshall and Rossman (2016), a study problem statement, purpose statement, central overarching research question and the conceptual framework should all align to achieve validity. Quantitative researchers use reliability and validity criterion to authenticate their research findings (Marshall & Rossman, 2016). Conversely, qualitative researchers use methods such as dependability, transferability, credibility, and conformability to demonstrate their conclusions are trustworthy, but the terms are essentially the same concept (Marshall & Rossman, 2016). The use of a case

study protocol, triangulation of the data, and transferability methods supported the conduct of the study (Merriam & Tisdell, 2016).

Reliability

According to Brutus et al. (2013), reliability is the process quantitative researchers use to increase the ability of future researchers to repeat a similar study and obtain similar results. Reliability is the dependability of a study, and study reliability may be the member checking of data interpretation, transcript review, expert valuation of interview questions and interview protocol (Bloomberg & Volpe, 2012). According to Merriam and Tisdell (2016), a study's reliability depends on producing consistent and similar results. Creditability and conformability are methods qualitative researchers deploy to ensure their research is trustworthy. The study design enabled dependability and promoted duplicating results for future research. The study design included the outline of the study purpose, the participant's selection process, description process to collect data, the research tools, defining the data interpreting process, articulation of the research results, and attention to reliability and validity of the study. I ensured the study reliability by aligning the interview questions with the central overarching research question, aligning the interview questions with the conceptual framework and following a standard qualitative case study research model.

My doctoral faculty colleagues reviewed the study interview questions. These associates understand the elements of qualitative research and case study research designs. The use of a small study sample size ensured the transferability of the research questions and helped to confirm the dependability of the data. I assured errors elimination

by listening to the voice recordings on the interview audiotape recordings and comparing them against the interview transcripts.

Hansson, Tolf, Ovretveit, Carlsson, and Brommels (2012) used a case study protocol to document the sequential steps in their research to understand why healthcare administrators have a difficult time reducing patient waiting lists. Hansson et al. (2012) offered a change intervention, but internal resistance hindered implementations as team members cited their strategy was unclear regarding support and task prioritization. A research protocol may indicate the data is reliable by providing a structure for researchers to follow in conducting their study (Yin, 2014). Yin (2014) suggested that with triangulation, researchers gather evidence from several sources of data, which supports the same theme, versus merely evaluating data independently. Carter, Bryant-Lukosius, DiCenso, Blythe, and Neville (2014) maintained that establishing a process of data triangulation indicates the findings are credible. Saunders et al. (2013) used data triangulation to illustrate the utilization of an evaluation strategy to promote nutrition and physical activities for children living in group homes. I triangulated the data and ensured the findings were credible by incorporating interviews, field notes, and appointment cancellation policy documents in the results of the study research.

Validity

The credibility, transferability, and confirmability of the findings define the validity of a quantitative study (Bloomberg & Volpe, 2012). According to Fusch and Ness (2015), qualitative researchers should show data saturation rather than internal validity, and they recommended the need to identify objective measures, transferability,

consistency and study applicability through qualitative data saturation. According to Fusch and Ness, researchers achieve data saturation when no more new patterns or themes emerge from the volumes of data collected during their research studies. I used a control model to show the exact interview where data saturation occurs. Following the path set by Fusch and Ness (2015) I conducted four interviews and achieved data saturation with the data collected from the four interviews. Member checking and triangulation of the research data ensured additional validity of the study findings.

Quantitative researchers demonstrate external validity by generalizing their findings to a large population (Woolcock, 2013). External validity does not apply to qualitative research. However, both qualitative and quantitative researchers must demonstrate their study is credible (Cope, 2014). I achieved confirmability by ensuring peer-reviewed literature can support the study results. Transferability, with sampling strategies and rich descriptions, allows researchers to share their information with other researchers allowing them to determine deficiencies in each other's studies (Burchett, Mayhew, Lavis, & Dobrow, 2013).

According to Bekhet and Zauszniewski (2012), triangulation may ensure the detail of data and assist in finding similarities and differences in the research findings. I used the collected data from the interviews, my observations, and the cancellation policies to triangulate the study. Marshall and Rossman (2016) defined triangulation as the collaborative strategy ensuring the validation of research data findings.

The study purpose was to explore the managerial intervention strategies healthcare administrators use to reduce patient no-show rates. Interviewing healthcare

administrators with patient no-show intervention experience increased my knowledge of the behaviors of patients who do not attend their appointments and which intervention methods work best (Emerson, 2015; Palinkas et al., 2015). I used semistructured interviews, reviewing appointment cancellation policies, and the literature review to ensure the validity of the study through different lenses.

Transition and Summary

The purpose of the explanatory qualitative single case study was to explore the managerial intervention strategies healthcare administrators use to reduce patient no-shows rates. The semistructured, open-ended question interviews consisted of feedback received from participants who had years of healthcare administrative experience in patient no-shows intervention strategies. I demonstrated credibility through triangulation of data and member-checking techniques ensuring the study evaluation was accurate. Steps for protecting the participants confidentially and ensuring collected data was accurate and complete were essential elements to consider during the study. Such measures included eliminating the raw data from the study and publishing information in a manner where readers would not surmise a participant's identity. I assigned codes to the participants to remove their identity from all themes and section 3 interview discussions.

In Section 3, I provided a presentation of the study findings in comparison with other peer reviewed studies from the literature review. The research study findings include discussions of alignment with the conceptual framework as related to the TPB. The applications to professional practice, implications for social change, the

recommendation for action, recommendations for future research, the reflection, and a conclusion were the final segments of Section 3.

Section 3: Application to Professional Practice and Implications for Change

In Section 1 I provided the foundation, background, problem statement, and purpose statement, while the literature review provided insight on all aspects surrounding patient no-shows. Section 2 included a detailed explanation of the study methodology including research exploration, study configuration, and data collection strategy. In section 3, I discuss (a) the overview of the study, (b) presentation of the findings, (c) applications to professional practice, (d) implications for social change, (e) recommendations for action, (f) recommendations for further study, and (g) reflections. This section ends with my conclusions stemming from the analyzed data and findings.

Introduction

The purpose of this explanatory qualitative single case study was to explore the managerial intervention strategies healthcare administrators' use to reduce patient no-show rates. The primary research question was: What managerial intervention strategies do healthcare administrators apply to reduce patient no-shows in order to increase business performance? The research participants of this study were active members if the ACHE, Hawaii-Pacific Chapter with experience in decision-making, appointment cancellation policy design, patient scheduling, and patient no-show intervention strategy. I used purposeful sampling as the participant recruitment method for the study. The method allowed me to complete four, 30-minute, private, in-depth, semistructured, open-ended interviews with the study participants. The participants' interview answers were audio recorded, transcribed, member checked, and analyzed to identify common themes. The study findings revealed five distinct themes: (a) reform of appointment cancellation

policies, (b) use of text message appointment reminders, (c) improve patient accessibility, (d) fill patient no-show slots immediately, and (e) create organizational and administrative efficiencies. In the next section, I present a detailed analysis of each the themes.

Presentation of the Findings

The overarching research question for this study was: What managerial intervention strategies do healthcare administrators apply to reduce patient no-shows in order to increase business performance? From the overarching research question of inquiry, the interview questions were:

1. What patient no-show intervention strategies have been most effective at your healthcare facility?
2. What makes these intervention strategies effective?
3. How do you measure the effectiveness of your patient no-show intervention strategies?
4. What challenges do patient no-shows pose at your healthcare facility?
5. What impacts do patient no-show rates have on the delivery of quality, comprehensive patient care?
6. What impact do patient no-show rates have on the business efficiency of your healthcare facility?
7. What additional information, not covered by the questions, would you like to share regarding patient no-show intervention strategies?

After receiving IRB approval, I contacted several healthcare administrators in Hawaii via e-mail to inquire if they were interested in participating in the patient no-show study. I sent the research participants a consent form inviting them to volunteer to participate in the study. The informed consent form and e-mail explained the purpose of the study and the role of the researcher. The informed consent form also included the overarching research question, sample research questions, and the procedures of the study. The participants who volunteered to participate stated in their reply e-mails they agreed to take part in study, and they understood the scope of the project, their research participant rights, and the secure protection of their personal information. The study included four healthcare administrators. I confirmed with each participant before the interview that they agreed to the audio recording of the interview for transcription purposes and ensured that the participants had a copy of the consent form before starting the interview.

Semistructured opened questions were used to gather information from the healthcare administrators during the four interviews. The semistructured format allowed me to ask additional questions based on participant responses. The interviews were recorded, transcribed, and analyzed. Reading transcripts while listening to the audiotape recordings ensured the transcript accuracy of the participants' statements and answers (De Massis & Kotlar, 2014). Membership checking was used to confirm the research participants' answers were recorded correctly and to improve the accuracy of the research data. According to Fusch and Ness (2015), member checking is when a researcher shares the transcribed interview data with each participant to validate the recording and accuracy

of the collected data. Pen and paper were used to code the transcripts and find common themes. I kept all collected study data confidential. I kept the study data in a locked storage cupboard, and I will destroy the data after 5 years.

The TPB was the basis of the conceptual framework for this study. The TPB consists of four major factors: (a) patient attitude towards their no-show behavior; (b) patient subjective norm toward a change in their behavior to no-show for their appointment; (c) the perceived behavioral control of no-show patients; and (d) the intention of patients to change their behavior to regularly attend their appointments (Ajzen, 1985). The body of knowledge collected from aligning the participants' responses with the overarching research question and the four principals of the TPB provided five themes. Peer-reviewed journal articles from the literature review and prior research study results supported the five themes discussed in the study.

Triangulation ensured the quality of the data. Anney (2014) proposed triangulation to find similarities, ensure better quality, and improve the credibility of a study. The review of various appointment cancellation policies, scholarly journal articles, transcribed interview data, the prior research study results, member checks, and my observations about the patient no-show phenomenon formulated the triangulation for this study. During the study data analysis, the following five distinct themes were identified: (a) reform of appointment cancellation policies, (b) use of text message appointment reminders, (c) improve patient accessibility, (d) fill patient no-show slots immediately, and (e) create organizational and administrative efficiencies. I discuss each theme in the following subsections.

Theme 1: Reform of Appointment Cancellation Policies

The first theme that emerged from the analyzed data emphasized the importance of an understandable appointment cancellation policy. All four of participants (100%) revealed that they were basing their patient no-show intervention strategies on their appointment cancellation policy. According to Norris et al. (2014), a patient no-show policy is the first step in developing an intervention strategy to reduce patient no-shows rates. All four of the participants (100%) stated communication is a key factor in patient no-show interventions. Three of four participants (75%; P1, P2 and P4) used their patient appointment cancellation policies to measure their patient no-show rates. Popple (2013) stated that without a clinic cancellation policy and patient no-show criteria, healthcare administrators have no managerial intervention strategy. All four of participants (100%) mentioned that they could not hold their no-show patients accountable if they did not provide the patients with a clearly defined appointment cancellation policy. According to Popple (2013), educating patients on the impact of patient no-shows can bring awareness to the issue, but if patients face no consequences for their no-show behavior, there is little to no motivation for them to change their behavior.

Competencies of management to apply strategies. All four of the participants (100%) were in upper management positions at their health care facilities. The four research participants firmly believed that they were able to implement effective reformed managerial intervention strategies to reduce patient no-shows if they discover successful interventions. All four of the participants (100%) belonged to at least one decision-making committee in their health care facility. The research participant study sample

represented competent managers with prior records of accomplishment in planning effective management strategies.

Specific initiatives undertaken. All four of the participants (100%) revealed at least one specific managerial patient no-show intervention strategy initiative that they introduced and spearheaded. P1 mentioned personal involvement with the formulating of the health care facility appointment cancellation policy and provided the following quote: "I reformed several appointment cancellation policies at the various health care facilities I worked during the 31 years of my career." P2 stated, "We have a well-written appointment cancellation policy displayed at the front desk. I trained the front desk staff to explain the policy to our new patients." P3 stated, "I implemented these patient no-show intervention strategies and put them also into the script so our staff knows what words to use when talking to our patient population." P4 stated, "I currently track patient no-shows, and if the patients do not show for three visits I ask the scheduling staff to inform the patients they cannot book in advance without a counseling session on the importance of coming for their appointments." All four of the participants (100%) specified reformatting of their appointment cancellation policies as intervention initiative strategies and this action aligned with the literature review and prior studies about patient no-show interventions.

Challenges to implementation of strategies. P1 admitted that patient no-shows present a managerial challenge by stating, "We have tried so many intervention strategies and failed at many in the past." P2 said, "Over the years, we experimented with several no-show intervention strategies. Some were more successful than others." P3 stated,

"Providing health care to the outer Hawaiian Island presents its challenges, and we try to provide specialist providers to fly to the outer islands to provide care." P4 stated, "We have struggled with the issues of no-shows for many years and still have not come up with an ideal solution." The four research participants' challenges were not unique to other healthcare administrators dealing with the patient no-show phenomenon. The literature review and prior studies about patient no-show interventions support the challenges claimed by the four research participants.

Correlation to the literature. An appointment cancellation policy needs to be short, compact, and clear to patients (see Appendix A; Feldman et al., 2014). Patients should receive education on the appointment cancellation policy of the health care facility they attend and no-show patients might need a reintroduction to the policy several times until they understand the consequences (Huang & Zuniga, 2014). From the analysis of the research participants' interview data; I identified the formulation of an appointment cancellation policy as integral to the managerial intervention strategy to reduce patient no-show rates.

Correlation to the conceptual framework. Planning and changing the behavior of patients to motivate them to attend their appointments regularly align with the TPB. (Feldman et al., 2014). According to Ajzen and Madden (1986), past patient behavior trends are a highly accurate predictor of future patient behavior. The healthcare administrative participants strove to reform and modify their appointment cancellation policies to accommodate for patients as well as healthcare facilities contribution to the patient no-show phenomenon. The participants were trying to change the attitude and

subjective norm of their patients using the patient's emotional response to the provider's recommendation and education on the importance of appointment compliance for the best health outcome (Berg et al., 2013; Guzek et al., 2015). The attitude and subjective norms are two of the four factors formulating the TPB. Two of the four participants (50%; P2 and P4) were using a patient no-show identifying system to alert scheduling staff about patient no-show habits. The schedulers tried to be more accommodative with the no-show patients and follow-up as to why they did not show for their last appointment. Popple (2013) stated that an analytical report could be designed to show: (a) no-show type, (b) appointment reminder type, (c) insurance type, (d) date of appointment, (e) the day of the week, (f) time of the day, (g) visit type, and (h) patient identification number. The medical staff was using coding systems to alert them to a patient's no-show behavior and help to predict the patient's potential to no-show for future appointments (Popple, 2013). The implementation of a coding system aligns with the TPB and with healthcare administrators' managerial intervention strategies to reduce patient no-show rates by assisting healthcare administrators to predict and plan for a patient's no-show behavior. The participants were using patient perceived behavior control by addressing and removing obstacles preventing patients from attending their appointments regularly. The implementation of attitude, norm, and perceived behavioral control as per the TPB helped the participants to formulate and nurture the intention of the patient's willingness to attend their scheduled appointments regularly (Kong et al., 2015). The higher the intention, the more likely patients will attend their appointments (Cayirli & Gunes, 2013;

Kemper, et al., 2014; Kong et al., 2015). Table 1 includes comments from the participants regarding the reform of appointment cancellation policies.

Table 1

Theme 1: Reform of Appointment Cancelation Policies

Participant	Participant's comments
P1	We have a written policy and a flier, but what works most effective is if they see a very touching poster and the effect when they choose not to come to their appointment and how that affects their battle buddy.
P1	I reformed several appointment cancellation policies at the various health care facilities I worked during the 31 years of my career.
P1	…we have tried so many intervention strategies many and failed at many in the past.
P2	We have a well-written appointment cancellation policy displayed at the front desk. I trained the front desk staff to explain the policy to our new patients.
P2	If there is no clinic, standards for appointment cancellations patient cannot be held accountable for their actions. You cannot have an effective patient no-show intervention strategy if you do not have a well-written understandable clinic appointment cancellation policy. A clinic cancellation policy is essential.
P2	Over the years, we experimented with several no-show intervention strategies. Some were more successful than others.
P2	We measure the patient no-show rates using our appointment cancellation policy.
P3	Without a clinic cancellation policy we cannot hold patients liable for not canceling their appointments timely
P3	I implemented these patient no-show intervention strategies and put them into the script so our staff knows what words to use when talking to our patient population.
P3	Providing health care to the outer Hawaiian Island presents its challenges, and we try to provide specialist providers to fly to the outer islands to provide care.
P4	When we started our focus on improving patient no-show rates, the first thing we did was defining and writing our clinic patient appointment cancellation policy. It is the start of our intervention.
P4	We have struggled with the issues of no-shows for many years and still have not come up with an ideal solution.

Theme 2: Use of Text Message Appointment Reminders

All four of participants (100%) participants mentioned text message reminders as the most efficient appointment reminder. Molfenter (2013) found SMS appointment reminders are impersonal, but these appointment reminders were the most efficient in reducing patient no-shows rates. Three of four participants (75%; P1, P2 and P4) used automated telephone appointment reminder services combined with SMS text messaging as their most effective intervention strategy to reduce patient no-show rates. One of four participants (25%; P3) mentioned text messaging as the future of their patient no-show intervention strategies. All four of participants (100%) of the participants mentioned their managerial patient no-show intervention strategies as a team effort between administrative staff, providers, and patients. Mendel & Chow (2017) found patient no-show intervention strategies are most effective when healthcare administrators, providers, and patients are working together to improve patient appointment attendance.

Competencies of management to apply strategies. All four of participants (100%) were familiar with patient appointment text message reminder invention strategies. All four of participants (100%) firmly believed text messaging are the most effective single intervention reminder to their patient population. The participants were either in the process of implementing a text message reminder system (P3) or measuring their text message reminder system results against their patient no-show rates (P1, P2, and P4). The four participants each were part of the implantation of the text messaging reminder system in their respective health care facilities. The research participants

revealed they represent competent healthcare managers with the knowledge of leading technology and experience of patient no-show interventions strategies.

Specific initiatives undertaken. All four of participants (100%) were in the process of initiating implantation of a text messaging reminder system (P3) or already using the text messaging systems and compare the results to their health care facility patient no-show rates (P1, P2, and P4). P3 stated, “We are also working on text messaging which is the next model…” P1 said, “We found of all the patient no-show interventions the SMS text messaging is the most targeted and efficient.” P2 said, “The text message work excellent because it always reach the patient directly and they can reply immediately.” P4 said, “These days’ patients all have cell phones and it looks like text message appointment reminders are the future…” The four research participants’ specific text messaging reminder intervention initiatives strategies align with the literature review and prior studies about patient no-show interventions.

Challenges to implementation of strategies. All four of participants (100%) were aware that they need to get special permission from the patients to send them text appointment message reminds. The participants did not see getting the permission as a challenge. According to Rand, Vincelli, Goldstein, Blumkin, and Szilagyi, (2017), patients are generally in favor of receiving SMS text appointment reminders rather than forgetting about their appointments and no-show for the appointment. The text message appointment reminder intervention strategies provide limited challenges at the fraction of the cost of other patient no-show intervention strategies (Iribarren, et al., 2017).

Correlation to the literature. According to Goyal et al. (2015), short text messages are a cost effective way to remind patients of their appointments. Al-Aomar and Awad (2012) found text message appointment reminders could reduce patient no-show rates from 10%-20%. Percac-Lima, Singer, Cronin, Chang, and Zai (2016), studies the effects of the text message appointment reminder intervention strategies on an underserved patient population and found patient no-show rate of 13.7% for patient that received the SMS text message reminder prior to their appointment, while the control patient group who did not receive any appointment reminder alert averaged a 20.2% patient no-show rate. The research supported the significant success of SMS text messages to reduce patient no-show rates (Huang & Hanauer, 2016; Norbash et al., 2016). The research participant uses a different combination of appointment reminder systems, but they all use text-messaging reminders and automated phone reminder message together.

Correlation to the conceptual framework. Text message reminder intervention strategies have the capability to produce positive change in patient preventative health behaviors, and the behavior can be sustained even after the intervention is stopped (Armanasco, Miller, Fjeldsoe, & Marshall, 2017). The text message reminder message intervention strategy aligns with the TPB as it pertains to changing the no-show behavior of patients. According to Zallman et al. (2017), text messaging was patients' first choice to provide health care related reminders rather than e-mail, phone, or reminder cards. Armanasco et al. (2017) found evidence showing that text message appointment reminder interventions can produce short-term patient health behavior change and may have

limited behavioral characteristics changes after the intervention stops. Table 2 includes comments from the participants regarding the use of text message appointment reminders.

Table 2

Theme 2: Use of Text Message Appointment Reminders

Participant	Participant's Comments
P1	We found of all the patient no-show interventions the SMS text messaging is the most targeted and efficient.
P2	If patients approve, we also send them text messages prior to their appointment.
P2	The text message work excellent because it always reach the patient directly and they can reply immediately.
P3	We are also working on text messaging which is the next model…
P3	We are hopeful that text messaging will reduce our no-show rates and once it is implemented there is a generation shift and they have smart phones, so this will be a shifting and complementing the human element.
P4	These days' patients all have cellphone and it looks like text message appointment reminders is the future…

Theme 3: Improving Patient Accessibility

All four of the participants (100%) mentioned that their health care facilities were striving to improve their health care accessibility to their patient population. Reducing patient no-show rates and improving patient attendance were an integral part of each participant's strategy to improve accessibility to patients. Makaroun et al. (2017) identified reducing of patient no-shows as one of the methods to increase more patient health care accessibility. All four of participants (100%) mentioned increasing health care accessibility as an improvement to the quality of their patient care. Patients who miss appointments and do not reschedule results in reduced quality of their follow-up care for

chronic health conditions (Popple, 2013). Two of four participants (50%; P2 and P4) said if their patients are seen timely for their appointments the patients consider their health care as high-quality. P2 stated “If patient no-show behavior can be changed to a positive willingness to attend appointments, it would not only improve the patient’s own health but also provide more access to patient care and improve the quality of health outcomes.” All four of participants (100%) stated they want to engage patient in their appointment scheduling to improve better attendance and accessibility to all their patients. P4 said, “It is logical if we reduce patient no-show rates we will be able to see more patients resulting in better health outcome to our patients. We are striving to this logical goal!” All four of participants (100%) wanted the best quality and most accessibility of health care for their patients. P2 stated, “It is much more costly to hire more providers than to optimize current provider availability by reducing patient no-show rates and keep the patient encounter rooms filled.” Three of four participants (75%; P1, P2 and P4) refer to their patients as clients. Clinic-specific patient no-show influences are within the control of healthcare administrators (Guzek et al., 2015). Competencies of management to apply strategies.

All four of participants (100%) were committed to create more health care accessibility for their patient population. The missions for the health care facilities employing the study participants all strived to constantly improve the quality of health care they provide to their patient population and health care accessibility plays an integral part in the quality of care provided to patients. According to O’Hanlon et al. (2017), the qualities of health care factors are: (a) timeless, (b) equity, (c) efficiency, (d) safety, (e)

effectiveness of care, and (f) patient-centeredness. Two of four participants (50%; P2 and P3) were expressive about their organization patient-centered vision for future health care in their health care facilities. P2 mentioned, being the chair of a committee to improve patient accessibility and patient-centered health care. P3 mentioned, setting the vision for patient-centered health care in the health care facility. The study participants' statement represented significant evidence of the participants' competency to create more accessibility to patient care within their health care facilities.

Competencies of management to apply strategies. All four of participants (100%) were committed to create more health care accessibility for their patient population. The missions for the health care facilities employing the study participants all strived to constantly improve the quality of health care they provide to their patient population and health care accessibility plays an integral part in the quality of care provided to patients. According to O'Hanlon et al. (2017), the qualities of health care factors are: (a) timeless, (b) equity, (c) efficiency, (d) safety, (e) effectiveness of care, and (f) patient-centeredness. Two of four participants (50%; P2 and P3) were expressive about their organization patient-centered vision for future health care in their health care facilities. P2 mentioned, being the chair of a committee to improve patient accessibility and patient-centered health care. P3 mentioned, setting the vision for patient-centered health care in the health care facility. The study participants' statement represented significant evidence of the participants' competency to create more accessibility to patient care within their health care facilities.

Specific initiatives undertaken. All four of participants (100%) were committed to create more health care accessibility for their patient population and they were involved in a number of projects to open up more accessibility to their patient. They all agreed the most cost effective why to increase patient healthcare accessibility is to reduce patient no-show rates and improve provider time utilization. They were not keen on hiring more providers while averaging high patient no-show rates. P3 mentioned, their health care facility offer transportation for patient to attend their appointment. P3 said, "We do good with transportation. I am not sure if other organizations do this. Yes, we provide transportation to patients that qualify for airfare coming from pacific island locations. Depending on their eligibility and if there is care, they need in Oahu and they may have flight eligibility" All four of participants (100%) mentioned high patient no-show rates as unsustainable. Some initiatives undertaken were combining live staff phone calls and text messaging reminders to the target no-show patient population instead of covering the total patient population.

Challenges to implementation of strategies. All four of participants (100%) stated frequent no-show patients should be educated on their negative contribution to the quality of patient care the health care facility can provide. Two of four participants (50%; P2 and P4) mentioned tracking down no-show patients were a challenge. P4 stated, "A few no-show patients in a health care facility population can contribute to a large amount of no-shows if they are facing no consequences." P2 was strongly opposed to the implementation of an administration fee for patient no-shows. P2 said, "Many healthcare administrators see the implementation of an administrative no-show fee as an effective

intervention against patient no-shows, but I disagree." All four of participants (100%) mentioned the change of patient no-show behavior as a challenge, but the most acceptable intervention strategies to the patient no-show phenomenon.

Correlation to the literature. In the health care industry, administrators often use the iron triangle as a measure to evaluate the business aspect of their patient care. The iron triangle consists of three interrelated factors: (a) cost containment, (b) quality of patient care, and (c) accessibility of patient care (Niles, 2015). A reduction in health care accessibility affect the quality of care because extended appointment waiting time is not considered quality health care (Dai, 2015; Fortin, Pries, & Kwon, 2015; Issel, 2016). The negative impact of high patient no-show rates contributes to health care costs, decrease healthcare access, and reduce clinical efficiency and provider productivity (Huang & Zuniga, 2014).

Correlation to the conceptual framework. The TPB aligned with traditional managerial intervention strategies striving to control patient no-show behavior, but all interventions to a certain extend improved efficiency and contribute to the overall quality of patient flow (Guzek et al., 2015). McLean et al. (2016) used the TPB as one of the conceptual framework theories in a study about appointment reminders systems. The TPB as conceptual framework in health care research studies are the first choice when researchers focus on monitoring patient behavior and formulate strategies to change patient behavior (Ahmadi-Javid, Jalali, & Klassen, 2017). The following Table 3 includes comments from the participants regarding creating health care accessibility by reducing patient no-show rates.

Table 3

Theme 3: Improving Patient Accessibility

Participant	Participant's Comments
P1	We can provide more comprehensive care if all our patient show for all their appointments all the time. It will allow providers to give the best care and accessibility to our Hawaiian patient population.
P2	Let's just say we can provide better care if all patient show up for their appointments.
P2	If we can change patient no-show behavior to a positive willingness to attend appointments it will improve patient health outcome and proved more access to our patients.
P2	It is much more costly to hire more providers than to optimize current provider availability by reducing patient no-show rates and keep the patient encounter rooms filled.
P2	Many healthcare administrators see the implementation of an administrative no-show fee as an effective intervention against patient n0-shows, but I disagree.
P3	We can certainly increase our patient care accessibility if patients do not no-show.
P3	We would like to see more patients, but when patients are not showing for their appointments, it does not allow us to quickly fill the appointments resulting in lost health care opportunity for other patients and a lack of accessibility.
P3	We do good with transportation. I am not sure if other organizations do this. Yes, we provide transportation to patients that qualify for airfare coming from pacific island locations. Depending on their eligibility and if there is care, they need in Oahu and they may have flight eligibility.
P4	It is logical if we reduce patient no-show rates we will be able to see more patients resulting in better health outcome to our patients. We are striving to this logical goal!
P4	A few no-show patients in a health care facility population can contribute to a large amount of no-shows if they are facing no consequences.

Theme 4: Fill Patient No-Show Slots Immediately

All four of participants (100%) mentioned their health care facility have revenue losses and cost associated with patient no-shows. Patients not showing for their appointments without prior cancellation do not allow the scheduling staff to utilize the vacant slots for other patients resulting in direct revenue losses, while the health care facility still have to pay all overheads and salaries (Guzek et al., 2015). P1 stated, “If the patient no-show problem can be solved it can save billions of dollars overnight.” It might sound like an outraged statement, but P3 mentioned it is not easy to measure the total cost of patient no-shows because it affects so many segments in the health care system. P4 stated, “Of course, we are concerned for the patient’s health, but I must also say these patients can cost the clinic money in the time and effort when they do not show up.” P4 stated, “Of course, we are concerned for the patient’s health but I must also say these patients can cost the clinic money in the time and effort when they do not show up.” According to Oakley et al. (2013), clinic overhead can be 65% or more of the total revenue, and more healthcare providers continue to leave their private practices because of unsustainable profit losses.

Competencies of management to apply strategies. Healthcare administrators are directly responsible for the financial budget of their health care facilities. For this reason they are always looking to manage their organization efficient and cost effective. High patient no-show rates add to expenses and unproductive labor. All four of participants (100%) mentioned they are actively working on reducing patient no-show

rates to increase revenue and balance their budgets. The strongest statement were mentioned by P1 “If we can solve this problem, we can save billions of dollars overnight.”

Specific initiatives undertaken. All four of participants (100%) mentioned they track their patient no-show rates and monitoring the success rate of each patient no-show intervention they implemented. The participants were conscious of negative effects high patient no-show rates had on their health care facility budget. They considered reducing their patient no-show rates as one of the easiest ways to improve revenue.

Challenges to implementation of strategies. All four of participants (100%) mentioned health care financial issue are always a challenge. P4 stated, “Changing no-show patient behavior is much more achievable the hiring providers at a low salary.” P2 said, “The financial reward of reducing patient no-show rates, while improving quality of care at the same time is what healthcare administration is all about.” Healthcare administrator strive daily to improve the health care experience their patients are experiencing at their facilities and reducing no-show rates is one of the most effective ways of improving quality of care (Guzek et al., 2015).

Correlation to the literature. Health care cost is on the rise quicker than any other expense in the United States, and it is slowly affecting the quality of health care in the United States (Berg et al., 2013). Research data indicated patient no-show rates are a significant financial burden on the U.S healthcare system (Friedberg et al., 2014; Kheirkhah et al., 2016). Outpatient no-shows cost the United Kingdom health system an estimated £600 million per year (Powell & Appleton, 2012). If clinics reduce their patient

no-show rates by one-tenth, the United Kingdom annual cost healthcare cost will decrease by £68 million (Powell & Appleton, 2012).

Correlation to the conceptual framework. Reducing the cost of patient no-show rates are the most cost effective if the patient no-show behavior can be change for long term appointment attendance. The TPB align with the reduction of patient no-show cost using the change in patient no-show behavior by changing patient attitude, measure and change patient subjective norm, implement and monitor a patient preserved behavioral control and change the intention of no-show patients to attend their appointment regularly. The following Table 4 includes comments from the participants regarding reducing the cost of patient no-shows.

Table 4

Theme 4: Fill Patient No-Show Slots Immediately

Participant	Participant's Comments
P1	If we can solve this problem, we can save billions of dollars overnight.
P2	If patients no-show they disrupt the clinic workflow, and if we do not see them we lose revenue. Patient no-shows cost us money.
P2	The financial reward of reducing patient no-show rates, while improving quality of care at the same time is what healthcare administration is all about.
P3	The total cost of patient no-shows is difficult to measure because it affects so many segments of the healthcare system. If patients no-show for their appointment it just does not add positive monetary value to our clinical outcomes.
P4	This then allow the front desk staff time to fill in the appointment slot with another person rather than having a slot left open, which of course cost the office money.
P4	Of course, we are concerned for the patient's health but I must also say these patients can cost the clinic money in the time and effort when they do not show up.

P4	Changing no-show patient behavior is much more achievable the hiring providers at a low salary.

Theme 5: Create Organizational and Administrative Efficiencies

All four of the participants (100%) mentioned how patient no-shows affects their business efficiency exponentially. According to Huang and Zuniga (2014), patient appointment no-shows reduce clinical efficiency and provider productivity. All four of participants (100%) statements underline the study specific business problem in their interviews. The specific business problem for the study was that some healthcare administrators lack the managerial intervention strategies to address and reduce patient no-show rates. The research participants did not have a lack of experience with patient no-show interventions, but it appeared their managerial intervention strategies were not as effective as they would have hope it to be. All four of participants (100%) were aiming for more desirable results and lower patient no-show rates.

P3 stated, “Patient no-show rates cost us money and affect the quality of care.” According to Dabholkar (2015), an increase in efficiency may result in more business profitability. Additionally, if healthcare facilities increase efficiency and profitability, patients may receive more accessibility to medical treatment within a reasonable time, without a significant increase in health care costs (Guzek et al., 2015). All four of participants (100%) understood the importance of containing patient no-shows to reduce their health care facility revenue losses. All four of participants (100%) linked high patient no-show rates to a decrease in productivity, efficiency, and quality clinical care.

Competencies of management to apply strategies. All four of participants (100%) were competent in designing and creating managerial strategies to increase their organizational efficiency through the reduction of patient no-show rates. The healthcare administrators work relentlessly to improve the work environment at their facilities and reducing patient no-show rates serve many purposes. Some strategies include training and consulting with providers with high patient no-show rates. P3 stated, “If the provider and clinical looks at productivity and I can tell what grid they are in...” The participants strive to have productive providers and they consider it their task to keep provider schedules filled. P3 stated, “Again, if you have a gap of no-shows you cannot sit around and do nothing, so it really does affect the efficiency of care, the patients, and the staff, so we have to be proactive in calling ahead and filling in those slots.”

Specific initiatives undertaken. All four of participants (100%) were tracking patient no-show rates actively and impementing corrective actions accordingly. All managerial no-show patient intervetion actions were considered as corrective actions. The participants had various combinations of patient no-show intervetions.

Challenges to implementation of strategies. All four of participants (100%) accepted the challenge patient no-shows provided. The challenge was rewarding because a reduction in patient no-show rates contribute to revenue as well as patient care quality. The reduction of patient no-shows align with the iron triangle because it increase health care quality, reduce cost and improve accesiblity to more health care. All, 4/4 (100%) of the participants mentioned when they had high patient no-show rates their health care facility productivity and efficiency was compromised, and their staff was not optimized.

Correlation to the literature. The general business problem for this study is that patient no-show rates cause bottlenecking, significant decreases in net gains and revenue losses, and business inefficiency within healthcare facilities (Berg et al., 2013). Patients not attending their appointments create inefficiencies and uneven workflow in health care facilities while indirectly deprives other patients of seeing their healthcare provider (Hwang et al., 2015). No-show patient are responsible for creating backlogs, which increase wait times urgent patients (Higgins et al., 2015; Zacharias & Pinedo, 2014). The negative impact of high patient no-show rates decrease healthcare access, and reduce clinical efficiency and provider productivity (Huang & Zuniga, 2014).

Correlation to the conceptual framework. Improving organization efficiency by reducing patient no-show rates not only support a behavior change in no-show patients, but also in the behavior of providers and healthcare administrators. If organization efficiency is optimized it set the stage for a productive work environment. Productive work environment contribution to positive outcomes and a positive work force will provide quality health care to patient. The TPB align best with this final fifth theme. All health care stakeholders benefit out of the creation of a more efficient health care facilities. The following Table 5 includes comments from the participants regarding creating organizational efficiencies through reduced patient no-shows.

Table 5

Theme 5: Create Organizational and Administrative Efficiencies

Participant	Participant's Comments
P1	Our clinic efficiency and business model are jeopardized by the chronic patient no-show behaviors.
P1	No-show patient drastically affect the efficiency of our business, and if we can solve this problem, we can save billions of dollars overnight.
P2	Patient no-show behavior is indirectly and directly affecting our clinic revenue and efficiency. We can provide better care if we can lower our no-show rates.
P2	Patient no-shows cost us money and quality of care.
P3	Again, if you have a gap of no-shows you cannot sit around and do nothing, so it really does affect the efficiency of care, the patients, and the staff, so we have to be proactive in calling ahead and filling in those slots.
P3	If the provider and clinical looks at productivity and I can tell what grid they are in…
P4	Our patient no-shows cause disruptions in our daily patient flow and provider schedules. The workflow variances are effective our clinical efficiency and to a certain extend the quality of care we provide to all our patients.

Research Questions

The overarching research question for this study was: What managerial intervention strategies do healthcare administrators apply to reduce patient no-shows in order to increase business performance? These strategies may also be helpful for other healthcare administrators to reduce patient no-show rates. The researcher acts as the instrument to collect the data during a qualitative study (Yin, 2014). I used semistructured, open-ended interviews to collect data during the data collection process of this study. The open-ended format of semistructured interviews allows research

participants to answer interview questions spontaneously and speak freely (Lee, 2014). In this section, I analyzed the answers to each of the interview questions.

Applications to Professional Practice

The results of this study may provide valuable information about managerial intervention strategies to reduce patient no-show rates. The study findings included five distinct themes: (a) reform of appointment cancellation policies, (b) use of text message appointment reminders, (c) improve patient accessibility, (d) fill patient no-show slots immediately, and (e) create organizational and administrative efficiencies. The results of the study might provide managerial strategies to improve the interventions strategies healthcare administrators are using to reduce patient no-show rates. Reducing patient no-show rates may increase the quality of healthcare to all patients by providing more health care accessibility and less appointment waiting time. More healthcare accessibility may provide better patient satisfaction and healthcare outcomes. The results of this study may be relevant to healthcare institutes, healthcare administrators and educational to healthcare administrative students. Additionally, the study results may contribute to the body of knowledge on the topic of patient no-show rates. Healthcare administrators and health care facility leaders are the target audience for the study findings.

Implications for Social Change

The research study contributes to social change by providing managerial intervention strategies to reduce patient no-show rates. When patient no-show rates reduce patient accessibility and patient care improve (Guzek et al., 2014). Improve quality may result in better patient satisfaction ratings. Healthcare administrators

focusing on patient satisfaction and performance are positively contributing to the social well-being of their patient population and communities by addressing the health care needs according to patient's needs (Kasiri, Cheng, Sambasivan, & Sidin, 2017). The findings and results of this study may improve patient health care outcomes, health care accessibility and organizational performance. Improving patient health care outcomes, health care accessibility and organizational performance may help healthcare facilities in the future to contribute even more to the social well-being of their patient population and local communities. Improving patient quality of care and health care accessibility in health care facilities may potentially improve the general health of a population. Improving the health of a population may decrease mortality and morbidity. Improving the efficient of a health care delivery system of a community may improve human conditions and effect social impact positively. Healthcare administrators that focus on providing effective and quality health care to patients may provide better health outcomes to the patient and thereby contribute to a positive social change in their communities. Sharing data and results from this study may contribute to an improvement in social well-being and increase healthcare access to patients in the culturally diverse healthcare delivery system in the Hawaiian Islands (Higgins et al., 2015).

Recommendations for Action

The results of this study might prove valuable to healthcare administrators dealing with patient scheduling and health care facility oversight. Healthcare administrators may find the managerial intervention strategies discussed in this study of use in improving their health care facility patient no-show intervention strategies and improve their

business performance efficiency. The study findings included five distinct themes: (a) reform of appointment cancellation policies, (b) use of text message appointment reminders, (c) improve patient accessibility, (d) fill patient no-show slots immediately, and (e) create organizational and administrative efficiencies. Triangulation throughout the study ensured credibility of the study. The study of literature review, appointment cancelation policy documents, member checking, identifying similar themes, applying the study conceptual framework interviews with multiple healthcare administrators from multiple organizations ensured triangulation. The literature review cover 217 peer-reviewed journal articles applicable to the patient no-show rates. The conceptual framework tied to the TPB although the study. The problem statement, purpose statement, overarching research question, conceptual framework (TPB) aligned while statements and finding correlate with prior research studies on the patient no-show phenomenon.

Recommendations for Further Research

In this study, I collected data from four healthcare administrators in Hawaii. A limitation of the study is the small sample size. If the finding can be generalized future researchers can expand to the research nationally and globally. Additionally, further researchers can add quantitative research with a larger data set to test the five themes discussed in this study. Future researchers may want to consider interviewing chief executive officers (CEO).

Reflections

In this study, I explored the managerial intervention strategies healthcare administrators in the Hawaiian Islands use to reduce their patient no-show rates and improve their organizational performance. During the study, I read more than 200 peer-reviewed journal articles associated with the phenomenon of patient no-shows. The scholarly reading, research participant interviews, and data analyzing enriched my academic experience at Walden University. With the guidance of my dissertation chair, I was able to learn valuable future research methodology that will be essential to my future academic career. My learning experience was not limited to the patient no-show topic, but I was able to open the door to the complex academic research world. I was fortunate to have the extensive and in-depth research support system at Walden University to serve as the basis for my future research and set the foundation for my future academic career.

Conclusion

The purpose of this explanatory qualitative case study was to explore the managerial intervention strategies healthcare administrators' used to reduce patient no-show rates. The review and analyzation of 217 peer-reviewed journal articles, appointment cancellation policy documents, interview data, and comparative analysis with prior research studies on the patient no-show phenomenon ensured triangulation. The TPB served as the conceptual framework to align healthcare administrative patient no-show interventions strategies with the prediction of no-show patient behavior and with healthcare administrators' plan to change the behavior of their no-show patients to improve their appointment attendance. The interview data revealed the following five

distinct themes: (a) reform of appointment cancellation policies, (b) use of text message appointment reminders, (c) improve patient accessibility, (d) fill patient no-show slots immediately, and (e) create organizational and administrative efficiencies. The study finding should provide insight and guidance to healthcare administrator wanting to reduce their health care facility no-show rates and thereby improve their organizational performance. Improving patient appointment attendance by lowering patient no-show rates provide better health outcomes and more health care accessibility thereby improving human conditions. The positive social impact contributes to an improvement in the Hawaiian community. Healthcare administrators and facilities focus on the study results may provide better future care to their patient population. I would recommend future research to include a more comprehensive research population and expand to different health care facilities in different locations.

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Appendix A: Clinic Cancelation Policy

No-shows and cancellations with less than two weekdays' notice are a significant problem for our small practice. Many practices overbook on purpose so that no-shows and cancellations would not limit access for other patients as well as cause a financial hardship for the practice.

When it comes to no-shows and cancellations, we have three choices:

1. A strict policy; or
2. Overbooking (leading to long wait times at our office); or
3. Charging for no-shows

We feel the strict policy is the best fit for our practice and we are proud of our ability to run on time.

Administrative Office

Schedule an appointment by calling XXX-XXX-XXXX. Administrative staff may only schedule routine well and follow-up exams; all acute needs must be evaluated by licensed medical personnel.

No Walk In's. [YOUR PRACTICE] is open by appointment only and cannot accommodate walk-in patients.

Schedule same-day appointments for ill visits. When one of our providers speaks with patients, it is determined through triage how soon a patient needs to be seen. Our policy is to see patients with urgent-care needs the same day they call, provided they call at least 2 hours before we close.

Patients who arrive on time are seen at their appointment time. Patients who have

arrived on time will be seen ahead of those who arrive late. If you arrive late, we may need to abbreviate or reschedule your appointment.

Call ahead if you are late or unable to make your appointment time. We will do all that we can to accommodate your late arrival and try to minimize the need to reschedule your appointment.

Appointments for additional children should be made by phone prior to coming to the office. If you would like another child to be seen, please schedule appointments for both children by phone at least 2 hours prior to coming to the office.

Turn off cell phones in the office and examination rooms.

[YOUR PRACTICE] will dismiss patients for violating this policy. Violations include:

1. Not showing for scheduled appointments (more than three annual no-shows)
2. Cancelling appointments with less than two weekdays' notice (excluding holidays) count as a no-show
3. Walking in without an appointment

Appendix B: Interview Protocol

Interview: Managerial Intervention Strategies to Reduce Patient No-Show Rates.

a. The face-to-face or telephone interviews will begin with an introduction and overview of the research topic.

b. I will remind the participants I am sensitive to their time and thank them for their willingness to participate in the study.

c. The participants will be reminded that the interview will be recorded, but the information will be strictly confidential.

d. The audiotape recorded will be turned on, and I will announce the participant's identifying code, as well as the date and time of the interview.

e. The interviews and responses to the seven questions and follow-up questions will last approximately 30 minutes.

f. The concept and plan for member checking will be explained, via contracting participants with transcribed data, and requesting verification of the accuracy of the collected information.

g. The recorded answers will be confirmed by the participants before I will conclude with a sincere thank you to each participant participating in the study.

Appendix C: Solicitation Letter of Invitation

Dear _____

My name is Charl Mattheus, and I am a Doctor of Business Administration (DBA) candidate at Walden University. I am conducting a doctoral research study to examine the managerial strategies to reduce patient no-show rates. My study is focused to investigate the following questions: what is the effect on the patient's health if they do not attend their scheduled appointments, what strategies could administrators use to improve patient no-shows and why do some patients attend their healthcare appointment, and other do not (a) factors contributing to patient no-shows are outdated appointment reminder systems, (b) a shortage of medical staff to remind patients, (c) cost involved reminding patient about their appointments, (d) and it has become acceptable for patients to no-show.

Based on your healthcare administrative experience with no-show patients and the intervention strategies you are using I would like to interview you to gather more information about your perceptions and beliefs about patient no-shows. The interview will not require more than 30-minutes of your time and will be scheduled at your convenience within [INSERT TIME FOR INTERVIEW PROCESS FOLLOWING COMPLETION OF IRB PROCESS]. I will perform a face-to-face or telephone conference interview at a location that is most convenient for you.

If you agree to participate in my research study, you can reply to the e-mail and your acceptance email will serve as your informed consent. If you would kindly review and reply to the email. The informed consent form will provide you with more background

information about the study. Additionally, it will outline your rights during the interview process. Please feel free to contact me if you have any questions or need any additional information.

If you are interested in learning more about the study, please contact me. Your support of my research study would make a considerable social contribution to the quality of patient care in the State of Hawaii by providing a better understanding of the patient no-show phenomenon.

I would like to thank you for your time and consideration.

Respectfully,

Charl Mattheus

Appendix D: Interview Script

Interview Questions

1. What patient no-show intervention strategies have been most effective at your healthcare facility?
2. What makes these intervention strategies effective?
3. How do you measure the effectiveness of your patient no-show intervention strategies?
4. What challenges do patient no-shows pose at your healthcare facility?
5. What impacts do patient no-show rates have on the delivery of quality comprehensive patient care?
6. What impact do patient no-show rates have on the business efficiency of your healthcare facility?
7. What additional information, not covered by the questions, would you like to share regarding patient no-show intervention strategies?