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# Exploring Strategies for Reducing Patient Failure to Keep Scheduled Appointments

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This is to certify that the doctoral study by

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MBA, University of Phoenix, 2011

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

High no-show rates in the ambulatory setting lead to underutilized resources, decreased clinic revenue, and lower productivity.  The purpose of this single case study was to explore strategies that administrators used to maintain acceptable no-show rates and maintain the sustainability of the healthcare practice.  The target population for this study included local chapter members of a professional healthcare organization that provided access to practice managers and administrators in the Las Vegas, Nevada regional area where there are a large number of practices that are not part of a health system; the sustainability of these practices is dependent on allocation of adequate resources.  The conceptual framework for this study was Kotter's 8-step change management model that uses 8 steps for successfully managing change within the organization and developing quality improvement initiatives.  Data collection included semistructured interviews with 2 practice leaders, observation of the organization's practice management and appointment scheduling systems, and a review of internal reports related to appointment trends and no-show rates.  Based on the data analysis using deductive and open coding techniques, 3 distinctive themes emerged from the data: appointment booking strategies, appointment reminder strategies, and provider flexibility.  The results of this study might positively affect positive social change by helping administrators improve access to care in an outpatient setting through improved appointment utilization and improve patient care outcomes with more appointment availability.

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Dedication

I dedicate this dissertation to my daughter, Brianna. She has been as much of a cheerleader for me as I have been for her. During the long hours of writing, she offered a comforting hug or uplifting words. Knowing that she is proud of me made the struggle worth it. My family and friends have been my strength throughout this entire process. My husband gave his support while I stressed at various stages. My father continuously told me how proud he was of me, which helped keep me focused. And my friends were there to celebrate each milestone. My mother instilled confidence in me at an early age. Although she is not here to witness this, I say her to, "mom, I made it and your daughter is a doctor!"

Acknowledgments

I would like to thank the members and leaders of my case study organization, who allowed me to invade their space in order to conduct my research. And I am grateful to my dissertation Chair, Dr. Edward Paluch, for his honest feedback and guidance. I am so thankful to have worked with you during this journey.

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Section 1: Foundation of the Study

Outpatient clinics are essential organizations for helping patients who do not require inpatient care to manage acute and chronic health conditions. Ambulatory practices that provide primary medical and specialty patient care make up the outpatient healthcare network. The success of these practices is dependent on consistent patient volume for sustainability and effective provider utilization (Samorani & LaGanga, 2015). The anticipated patient volume is determined by the assignment of clinic resources such as the number of available appointments compared to the utilization of those appointments. When patients do not use those slots, the clinic loses money and the loss of expected revenue is financially burdensome on the practice (Mieloszyk, Rosenbaum, Hall, Raghavan, & Bhargava, 2018).

A consistent problem that threatens outpatient clinic revenue is the challenge of reaching the anticipated patient volume. Although the clinic staff fills the appointment slots, those appointments are often unused when patients do not show up for their scheduled appointments. These no-shows are missed opportunities for the clinic to earn revenue and meet financial obligations to sustain the practice. Additionally, unused and wasted appointments limit availability for others in the community. Finally, concern for population health increases because patients missed critical opportunities to manage healthcare problems.

**Background of the Problem**

Administrators and healthcare providers respond to patient demand for care by increasing resources and appointment availability. Rising no-show rates resulting from

patients scheduling appointments but failing to attend creates challenges the ability to accurately measure resources (Kheirkhan, Feng, Travis, Tavakoli-Tabasi, & Sharafkhaneh, 2016). Appointment no-shows in the clinical practice reduce revenue and affect productivity. In addition, the no-shows disrupt operations, hinder productivity, and operational efficiency is compromised when resources are overestimated and underutilized (Menendez & Ring, 2015).

The focus of this study was to explore the strategies that administrators use for reducing no-show rates, in which the overall goal for the organization is to reduce the negative impact on the clinic's sustainability. Despite there being no single method that can eliminate no-show behavior, recognizing the reasons for missed appointments was important in developing strategies to reduce those instances. A review of literature on this topic provided information regarding common strategies used to understand and addressed this problem. By using a case study, the goal was to recognize those reasons for no-show behavior, examine the strategies administrators in the organization used to counter this behavior, and report the outcome of the strategies.

## Problem Statement

Excessive no-show rates affect efficiency and lead to under-utilized staff and loss revenue (McMullen & Netland, 2015). The average no-show rate in primary care and specialty clinics is 18 to 25% (Kheirkhan et al., 2016). No-shows cost practices nearly $385,000 in lost revenue each year (Huang, Ashraf, Gordish-Dressman, & Mudd, 2017). The general business problem is that administrators struggle to maintain sustainable

clinic operations affected by high no-show rates.  The specific business problem is that some administrators have limited strategies for reducing no-shows.

## Purpose Statement

The purpose of this qualitative case study was to explore the strategies that administrators use to reduce no-shows.  This study is beneficial to administrators struggling with efficiency and revenue problems resulting from no-shows.  A case study method enables others to explore the strategies and outcomes of other organizations. This location for this study was the Las Vegas, Nevada regional area.  The population for the study included clinical managers and administrators from an ambulatory practice that could demonstrate the strategies for approaching the business problem.  The study could help administrators improve access to care through increased appointment availability for those patients in the community.

## Nature of the Study

The nature of this study was to review strategies that administrators of ambulatory care practices implemented, and whose goal was to reduce patterns of no-show behavior among clinic patients.  Qualitative researchers seek to explore a certain problem or phenomenon (Marshall & Rossman, 2015).  Bloomberg and Volpe (2015) agreed by defining qualitative research as the approach designed to explore the reasons behind a specific problem.  In contrast, researchers use quantitative approaches when statistical or measured data are a significant part of the research and a mixed-methods approach uses elements of qualitative and quantitative research within the study (Curry & Nunez-Smith,

2014).  Because the focus of the study was to explore the strategies of a specific population, the qualitative method was the most appropriate research method.

I chose to use an exploratory case study approach for this study.  The purpose of the study was to explore effective ways for reducing patient no-shows.  The case study was the most beneficial approach for healthcare organizations exploring process changes and reports on outcomes (see Hancock & Algozzine, 2016).  The phenomenological approach focuses on participants' experiences while dealing with the problem (Yin, 2018), but would not have been effective in describing the ways the organization dealt with the problem.  Neither the ethnographic nor phenomenological research designs were ideal for this study because these methods when used in healthcare focus on observing group behavior (Green & Thorgood, 2013) or consideration of personal opinion.

## Research Question

Qualitative research using a case study approach was useful in exploring how administrators from healthcare organizations approached no-shows in the past and the methods they used in their approaches.  The central question for the research study was as follows: What strategies do administrators use to reduce no-show rates?

## Interview Questions

1.  What strategies do you use to reduce no-shows?
2.  How are you tracking these data?
3.  What problems contributed to the patients' failure to keep their appointments?
4.  What strategies did you use to remind patients of their scheduled appointments?

5. How did you capture the results of the strategies you used?

6. What was the difference in patient appointment attendance after using the method or methods tried in your practice?

7. How did you assess patient satisfaction with the methods you have implemented?

8. Are there any other aspects of how you deal with no-shows that would be important for my study?

**Conceptual Framework**

The conceptual framework is the link between the business problem, the literature, and theories related to the research topic (Bloomberg & Volpe, 2015). This research was aligned with eight-step change model, which details the steps needed to introduce change to stakeholders, communicate the need for the change, and assess whether the change was effective (Kotter, 2012). Kotter's model was introduced in 1996 and includes eight steps for successful management of change: acting with urgency; assembling a group to lead the change effort; developing a vision and strategy; communicating the need for change; removing obstacles; planning for improvements; producing more change; and implementing new approaches. Kotter (2008) emphasized urgency in correcting problems and developing continuous change processes is necessary for sustainability.

This study involved exploring strategies administrators use to reduce no-show rates and the goal was to use this as a model for organizations that struggle with excessive no-show behavior. Although Kotter's change model is not specific to

healthcare organizations, the model was grounded on dealing with productivity changes brought on by uncertainty and changing stakeholder culture (see Crouzet, Parker, & Pathak, 2014), which in this case aligned with the inability to allocate resources due to no-show rates and changing patient behavior.

## Operational Definitions

*Adherence:* Following treatment plans or guidelines (Nwabuo, Dy, Weeks, & Young, 2014).

*Administrator:* The administrator is a person in a leadership capacity within the clinic or medical practice who has decision-making authority, and who oversees clinic operations (Medical Group Management Association [MGMA], n.d.).

*mHealth:* Healthcare practices supported by technology and mobile devices such as smart phones (Saeed, Somani, Sharif, & Kazi, 2018).

*No-show:* A no-show is an instance when a patient fails to arrive for a scheduled appointment or cancels an appointment less than 24 hours prior to the scheduled appointment time (Kheirkhan et al., 2016).

*Practice:* A practice is a clinical facility in which patients can receive primary or specialty care on an outpatient basis (MGMA, n.d.).

*Sustainability:* Sustainability refers to the organization's ability to manage financial resources and influence productivity needed to successfully thrive (Pivoda, 2016).

**Assumptions, Limitations, and Delimitations**

As the researcher, I considered the assumptions, weaknesses, and barriers to conducting this qualitative study. This qualitative study involved understanding no-show behavior and examining various strategies organizations use for reducing no-show rates. The assumptions in the study are general statements made about the research that are accepted as true (Flick, 2014). Similarly, limitations are the barriers and restrictions to the study (Marshall & Rossman, 2015). The limitations are factors that impose restrictions on the study in which the researcher cannot control (Maxwell, 2012) while the delimitations represent the boundaries or narrowed scope used for the data collection (Flick, 2014).

**Assumptions**

The assumptions were about the participants' knowledge of the business problem and of their individual organization. I assumed that the participants were employees of the case study organization. The participants had to have authorization by the senior leaders to release information about the clinic's operations. Another assumption was that the participants were knowledgeable about the clinic's internal processes and could answer questions about those processes. Finally, I assumed that the participants could provide actual data explaining the methods used to identify no-shows as well as the strategies implemented for reducing those no-show rates.

**Limitations**

The limitations to this study were related to the structures of the organizations represented in the study and the leadership levels of the study participants. Limitations

included the study participants' availability to meet with me and my ability to access data relevant to the study. Coordinating a meeting with the study participants depended on their availability to participate in the confidential and in-depth interview process without disrupting clinic operations. Other limitations included the ability to retrieve data from the organization's reporting tools, the functionality of the clinic's internal electronic systems, and the age of the organization's data. Previously collected documentation relevant to the clinic's processes may be outdated and may not reflect future changes in technology. In addition to these limitations, the responses from the participants may be specific to certain clinic specialties and may not be considered best practices for all clinical specialties in the industry.

**Delimitations**

The population for the study was targeted toward ambulatory clinic leaders with the focus of the study primarily on routine and follow-up appointments. Since no-shows often lead to inefficiencies and loss revenue in outpatient clinics (Menendez & Ring, 2015), these clinics benefit from having processes in place to reduce no-show rates. Data for this study were limited to attendance adherence for routine appointments, although the organization's highest no-shows may be related to pre- and post-procedure appointments. The study did not include appointments with nursing staff or other nonphysician staff such as medical assistants or social workers.

**Significance of the Study**

**Contribution to Business Practice**

Instances of missed appointments are significant problems because these missed appointments prevent the appropriate allocation of those resources. Unused appointments limit the availability of appointments for others, resulting in limited access to care and decreased efficiency, which affects health quality outcomes (McLean et al., 2016). When patients fail to attend their scheduled appointments, this behavior threatens the practice's revenue as resources are allocated based on patient scheduling and demands. Administrators benefit from the strategies and processes that other administrators have developed and tried as well as the lessons learned from those methods. With examples of successful strategies implemented in other organizations, administrators can gain insight on strategic tools for approaching this problem, which will assist in better utilization of resources and improvement in operational efficiency.

**Implication for Social Change**

The results of this study could improve access to care for patients through better utilization of outpatient appointments, thus reducing emergency department (ED) visits and increasing screening appointments for preventive care (see Hwang et al., 2015). ED visits increase by 3 to 4% each year for patients seeking care for treatment of chronic conditions such as hypertension when the condition is not properly managed (Singh & Yu, 2016). Patients who seek treatment in the ED for chronic nonacute conditions do so because of lack of access to appointments with providers in the clinic (Kim, Mortensen, & Eldridge, 2015). This study may provide strategies for administrators to increase

access to appointments in their practices by reducing no-show rates.  An improvement in the access to care could also decrease ED visits for nonacute issues and encourage patients to establish relationships with primary care providers.

### A Review of the Professional and Academic Literature

Administrators are responsible for overseeing the operations of the practice and managing clinic operations by developing strategies that enhance sustainability.  Clinical effectiveness, revenue stream, and operational efficiency are areas that are distressed by last minute cancellations and no-shows.  No-shows negatively impact that sustainability, affect the administrator's management of resources, and negatively impact the organization's bottom line.  Administrators in some specialties have reported average no-show rates of 25%, with an estimated loss of $3 million in revenue (Kheirkhan et al., 2016).  By understanding the reasons for missed appointments, administrators can use that data to develop strategies for reducing excessive no-shows and lowering the risk of lost revenue.

The purpose of the literature review is to understand those reasons patients miss their appointments and examine how organizations have used this information to develop strategies for addressing no-shows.  The literature review includes articles retrieved from the health sciences database Medline and academic databases ProQuest, EBSCO, and PubMed, with a primary search for peer-reviewed articles for the period of 2014 through 2018.  Keywords for this search were *no-shows*, *clinic appointment*, *missed appointments*, *patient appointment compliance*, *clinic revenue*, *conceptual framework*, *change management theory*, and *Kotter's change model*, as the primary key search

words.  As a result, 122 references were used as part of the literature review and

foundation for this study.  Of those references included in the review, 103 (86.81%) were

peer-reviewed with publication dated within the search period.  Sources for this study

included academic texts and information from industry sources.  The literature is

organized in a way that addresses various aspects significant to the study.  The compiled

literature provides foundational support relevant to the factors contributing to no-show

behavior; how no-shows impact the clinic's revenue, efficiency, and patient care; and

various strategies for reducing no-shows.

**Factors Contributing to No-Shows**

Healthcare leaders realize that the reasons patients miss appointments may be

influenced by different factors.  These reasons may vary by patient demographics such as

age or gender, geographic locations, type of clinic facility, and type of care services

provided, but might include satisfaction factors such as lead times between appointments

and previous care experiences (Huang & Hanauer, 2016).  Common reasons patients

provide for not attending their appointments are transportation problems, inconvenient

appointment times, or forgetfulness (Samuels et al., 2015).  While there is no single

contributing factor that is common among all patients in every market, understanding the

reasons patients miss appointments is an integral part of the research and strategies used

for reducing no-shows.

Lead times between appointments can contribute to higher no-show rates in

primary care clinics.  Long wait times for appointments and the wait time to the next

available appointment lead to an increase in no-shows.  No-show rates tend to be higher

in primary care clinics when the lead time between scheduling and the date of the appointment is greater than 4 weeks, especially for new patients whose appointments were made for acute conditions in which the symptoms disappeared before the appointment date (Drewek, Mirea, & Adelson, 2017).  The no-show rate is highest when a patient is unable to get an appointment within 3 days of the request (Moore, 2017).  Leaders at a Philadelphia medical center conducted a study of this theory comparing the lead time and no-show rates between two groups of patients.  Between those groups, the no-show rate was lower for the group of the patients whose appointments were within 2 weeks of scheduling when compared to the other group whose lead times was longer than 2 weeks (Navarro, LaPiene, & Sivak, 2017).  McMullen and Netland (2015) agreed that lead times between appointments were predictors of no-show behavior and suggested exploring strategies that would support scheduling appointments within 2 weeks of the request, which would reduce no-shows by 2%.

A patient's level of satisfaction with aspects of the care experience, such as wait times and the appointment scheduling process, can affect appointment adherence.  It is presumed that patients chose their physicians based on the provider's reputation or referrals from family or friends. However, negative experiences, including lead times between appointments, can change their opinion and influence patient attendance.  In customer service surveys administered by an organization to determine patient satisfaction, patients expressed dissatisfaction with their overall experiences from the scheduling process to the interaction with the staff, which influenced their attendance behavior (Katre, 2014).  Patient satisfaction is an important sustainability factor for

practices. Patients dissatisfied with their clinic experience do not form relationships with or develop loyalty to the healthcare provider or the organization and are less likely to feel obligated to return to the clinic for follow-up care (Astuti & Keisuke, 2014).

Some organizations studying their no-show behavior theorized that no-shows were more likely to occur on certain days of the week or seasonal times of the year. No-show rates are higher for early morning appointments and the first appointment of the day compared to the attendance for late morning and early afternoon appointments (Lee et al., 2018). Researchers at various organizations sought to determine if a correlation existed between these factors. No-show rates appeared to be highest on Mondays and lowest on Fridays, the days of the week that could be considered the most negative and positive days of the week respectively (Kheirkhan et al., 2016). Chong and Fantl (2017) agreed that certain timeframes and even weather can influence attendance behavior, stating that no-shows are significantly higher, 40%, during extreme weather and during the winter months of December, January, and February.

**Demographics and Social Factors**

Researchers have theorized that a correlation exists between demographic or socioeconomic factors and clinic no-show behavior (Percac-Lima et al., 2015). Age and education levels were among predictors cited in studies on patterns of missed appointments (Huang & Zuniga, 2014). Researchers at the Henry Ford Health System in Detroit determined that there were higher instances of missed appointments among younger working patients, which could be contributed to their inability to balance employment obligations and personal appointments (Miller, Chae, Peterson, & Ko,

2015).  In addition, age, gender, culture, and ethnicity may impact the patient's willingness to develop trusting relationships with their healthcare providers, creating further communication barriers (Akter & Doran, 2014).  Furthermore, the results of a study at a Veterans Affairs primary care clinic were that the highest instances of no-shows were in the 20 to 39 age range, among women and non-Whites, and among patients being treated for mental health conditions (Boos, Marvin, Bittner, & Kramer, 2016).  In a study examining factors influencing no-shows for imaging appointments, the results were similar with women having higher no-show rates than men, although the study population was Saudi Arabians, and culture may have also been a contributing factor to this appointment behavior (AlRowaili, Ahmed, & Areabi, 2016).  Age may also be a barrier to management of care as elderly patients have better appointment adherence, but communication and understanding of the treatment plan is a concern for providers (Hung, Fu, Lau, & Wong, 2015).

Researchers at Stanford University reported that there was an increased likelihood of no-shows among patients in underserved areas as well as those with government-subsidized insurance such as Medicaid (Perez et al., 2014).  In a study of patients treated at an inner-city medical center, Nwabuo et al. (2014) found no significant correlation between appointment adherence and demographics such as age, gender, or ethnicity in that population but that a correlation existed between the patient's income, insurance, and socioeconomic status with their appointment adherence.  In a similar study of no-shows at an academic pediatric otolaryngology practice, 80% of the no-shows were patients with public insurance compared to patients with commercial insurance plans (Huang et

al., 2017).  Other social issues such as lack of transportation problems in underserved and low-income communities pose significant barriers to healthcare, with this problem contributing to 20% of the appointment no-shows (Samuels et al., 2015).  MacLeod et al. (2015) also reported that more than 3.6 million adults in low-income areas stated that lack of transportation was their primary reason for appointment nonadherence.  Patients living in rural areas reported the distance to medical facilities as a significant barrier to appointment adherence, prompting practices to consider telemedicine options for rural patients (Huang & Hanauer, 2016).  While there have been several studies on no-show influential factors, a study conducted at Mt. Sinai Medical Center contradicted this theory.  In a 12-year review of the organization's no-show data, there were no significant correlations between no-show rates and primary demographics such as age, gender, economic factors, or insurance (Chong & Fantl, 2017).

**Financial Impact of No-Shows**

Industry experts have estimated that missed appointments cost the U.S. $150 billion each year (Grier, 2017).  This problem is not unique to private health systems. The Veterans Health System has estimated that the financial impact of system-wide no-shows to be $564 million per year (as cited in Davies et al., 2016).  With the no-show rate at its highest, a clinic with an annual no-show rate of 26% reported $28,000 in missed revenue each month, estimating nearly $789,000 in billing loss and $258,000 in reimbursement loss for the year (Guzek, Gentry, & Golomb, 2015).  A retrospective study of national no-shows over a 10-year period concluded that no-shows in a primary care practice cost $196 per encounter in 2008, with an estimated $3 million annual lost

revenue (Kheirkhan et al., 2016). In 2009, the cost of missed appointment escalated as high as $340 per encounter depending on the anticipated services with a financial loss ranging from $191K to $384K per year based on a 15% no-show rate (Huang et al., 2017). The costs associated with no-shows is higher for specialty appointments than for primary care appointments (Aggarwal & Sullivan, 2016). In a 3-month study of referral appointments to a psychiatric practice, providers estimated $17,000 in missed revenue during that 3-month period alone (Clouse, Williams, & Harmon, 2017). Missed revenue for radiology, imaging, and diagnostic screening appointments is estimated at $1 million per year (Mieloszyk et al., 2018).

Regardless of the type of ambulatory practice reporting the no-shows, the amount of missed revenue opportunities is detrimental to the practice in anticipation of appointment adherence for the entire family visit. Pediatric outpatient facilities have reported an average no-show rate of 43%, with a potential revenue loss of more than $730,000 (Perez et al., 2014). In addition to missed revenue for the appointment resulting from the inability to collect for services, no-shows have other financial impacts on practices. For academic practices who use rental clinic space and equipment, missed appointments directly affect the overhead cost of operating the practice (Chong & Fantl, 2017). Missed appointments may also indirectly affect the cost of care for patients as healthcare facilities have increased fees in order to adjust to balance the cost of care and the cost of additional resources aligned with patient demand.

**No-Shows and Impact on Efficiency**

The uncertainty of patient attendance prevents healthcare organizations from effective usage of resources relative to clinic operations. No-shows result in lost time for providers and reduced quality of care (Kumthekar & Johnson, 2018). Administrators oversee the appropriate allocation of resources based on scheduled appointments and anticipated patient volume. Last minute cancellations prevent the facilities from scheduling other patients into those available appointment slots, thus decreasing the facility's effectiveness and overall revenue (Mendel & Chow, 2017). Underused appointments limit availability for other patients, particularly for new patients who wait an average of 30 days for an appointment (Corn, 2016). Missed appointments pose challenges for reaching cost and efficiency goals (Guzek, Fadel, & Golomb, 2015). Aside from unused appointment slots, no-shows disrupt productivity and efficiency, and diminish resource allocation by tying up resources that could be available for patients who comply with appointment scheduling. Inconsistent appointment utilization leads to overstaffing and inability to project effective staffing for clinic operations. Ineffective forecasting for current and future clinic needs results in ineffective strategic internal organizational decisions. When the clinic volume is lower than expected, administrators must deal with inefficient use of resources, loss revenue, and lower availability for other patients (Menendez & Ring, 2015) and cause a negative effect on physician productivity (Miller et al., 2015). In facilities in rural or impoverished areas, or where resources such as medical equipment is already limited, no-shows exhaust those already deficient resources (Chand, Kamble, Diwan, Mahobia, & Chand, 2017).

Ideally, clinic leaders prefer requests from patients to reschedule appointments over patients failing to show up because this would allow an opportunity to fill the appointment slot with walk-in patients or offer appointments to patients with acute issues. Yet requests to reschedule previously cancelled appointments can also cause an overload in the appointment scheduling systems. Although utilizing the staff to reschedule missed appointments is beneficial for continuity of care, the appointment rescheduling process for those who missed critical treatment opportunities is a tedious process that requires time and staffing to respond to the requests. To examine this impact on staff resources, researchers conducted a study of requests to reschedule at a hospital-based dermatology clinic in Portugal during a 12-month period in 2009 and examine this behavior as well as the reasons patients provided for rescheduling the appointment. Based on the analysis of the data collected for this study, more than half of the patients called to reschedule their appointments ahead of time rather than failing to show up (Guedes, Leite, & Baptista, 2014). Other patients called immediately upon realizing they had forgotten about the scheduled appointment. Although this response was preferred, the increased call volume was often challenging for the staff. Because of the difficulty of managing the scheduling requests, the clinic explored different methods to decrease the number of missed appointments. Offering financial incentives to encourage patients to have preventive screenings such as mammograms or to participate in clinical trials improve attendance. There is limited literature on the effects of incentives and appointment adherence. However, experts warn that incentives may encourage appointment follow-up visits but not necessarily support healthy outcomes (Schmidt, 2015).

**No-Shows and Impact on Patient Care**

Appointment adherence is important for chronic disease management and treatment of serious illnesses such as diabetes and hypertension, which could prevent the further development of other health conditions. No-shows lower opportunities for physicians to make timely diagnoses for diseases and illnesses (Grier, 2017). Some ethnicities are predisposed to certain illnesses such as hypertension. Diagnostic testing and screening aids in early disease detection of these conditions, which could be delayed when patients miss critical appointments with their providers (Kheirkhan et al., 2016). These represent missed opportunities for managed care and delay treatment and increases risks of patients seeking treatment in the ED for chronic health issues that could have been managed in an outpatient setting (Mendel & Chow, 2017). Although follow-up appointments benefit patients with chronic conditions, the no-show rate at Beaumont Health in Royal Oak, Michigan was nearly 62% until interventional methods were developed to reduce those rates and educate patients on the importance of maintaining their appointments (Ali-Ahmed & Halalau, 2016). Transition of care between providers and even facilities may be a contributing factor to appointment adherence. The transition from monitored care in an inpatient setting to outpatient care where the patient is responsible for managing their own care may impact a patient's engagement in their care and disease management (Daniels, Loganathan, Wilson, & Kasckow, 2014).

Patients often miss appointments because they do not find value in the appointments; they have little faith that the medication will work; or they cannot afford the medication prescribed (Nwabuo et al., 2014). Others believe their conditions have

been resolved when symptoms dissipate.  Thompson et al. (2016) reiterated this theory

stating that patients are resistant to follow-up appointments if they do not notice

improvement or decline in their conditions, even though underlying progressive changes

may existence.  Patients with previously diagnosed or undetected issues and who

frequently miss appointments may have increased instances of ED visits when their

health conditions become unmanageable (Hwang et al., 2015).

**Strategies for Reducing No-Show Rates**

Last minute cancellations and underutilized appointments lead to an increase in

the length of time it takes for other patients to obtain appointments.  With wait times and

lack of appointment availability among the reasons for no-shows, administrators should

focus their strategy development on ways to reduce wait times in the clinic and increase

access to care through appointment availability.  To discourage no-show behavior,

administrators must understand those reasons for the behavior, track the no-show data,

and use that data to develop integrated systems geared toward achieving the expected

outcome (Bainbridge, Brazil, Ploeg, Krueger, & Taniguchi, 2016).  The literature

includes various methods for tracking and analyzing no-shows, reevaluating patient

reminder systems and developing strategies in response to patients' reasons for no-shows.

Practice staff use phone calls to patients, whether automated or person-to-person, as part

of their reminder strategies.  One practice's method involved using nursing staff to make

personal calls to patients, resulting in a 33% reduction in no-shows for scheduled

procedures and improving revenue and efficiency for the facility (Childers, Laird,

Newman & Keyashian, 2016).  And the 60% no-show rate among diabetes patients at

Beaumont Health in Royal Oak, Michigan was reduced to 19% when staff made person-to-person calls to patients to emphasize appointment adherence and compliance (Ali-Ahmed & Halalau, 2016). There were similar results in a study conducted at a Veterans Health Administration facility. In the 250 patients called as part of that study, no-show rates were highest for patients where there was no answer to the call or a message was left when compared to the significantly reduced no-show rate for patients who answered the call (Teo, Dobshca, Forsberg, Marsh, & Saha, 2017).

Using staff to call patients to remind them of their appointments sends a message of importance to the patients compared to automated calls (Kumthekar & Johnson, 2018). However, Weiner (2018) stated that practices who rely on phone calls can expect employees to spend at least two minutes per call, with 19% of the voicemails going unheard, making the calls the least effective reminder method. Phone call reminder systems were less effective for the Planned Parent Federation of American (PPFA), who used phone call reminders in a controlled trial designed to remind women to complete the vaccination series for the human papillomavirus (HPV). At the conclusion of their 32-week trial, researchers at PPFA could not conclusively prove that reminder calls improved the patient attendance rate, even though the implementation yielded some positive results. The response rate for patients in the controlled group was 18%, a slight increase over the 17% of the women who did not receive reminder calls (Patel et al., 2014).

Automated call systems are the more cost-effective reminder methods than using staff to personally call patients (Shah et al., 2016). However, automated calls did not

prove to be effective for staff at a pediatric academic medical center where administrators noticed that patients often ignored calls from automated systems because they associated those calls with bill collection efforts and other unwanted calls, or due to incorrect phone numbers (Upshaw et al., 2013). Another problem the authors noted was that automated calls did not reach patients who frequently changed their phone numbers, who had phone numbers that were no longer in service, or who used prepaid cell phones. The Department of Family Medicine at Mayo Clinic implemented an electronic automated reminder system that would alert patients to the screening requirement, resulting in 88% of respondents who received the reminders getting screened as instructed (MacLaughlin et al., 2014).

There are limitations to the use of technology-driven methods in patient care such as firewalls and security restrictions. Emails sent to patients may even be undeliverable emails due to full email inboxes. Many electronic health records systems include a built-in functionality that allows communication with patients using email or direct messages sent through the portal much like mail or phone call methods. Any information exchanged with the patient must follow regulatory guidelines for protection against unintentional disclosure of protected information (Tennant, 2018). Three Michigan-based pediatric clinics sent appointment reminders by email to patients through an encrypted service. Throughout the study, there were notifications of undeliverable emails, alerting the clinics that patient registration information needed to be updated which could be promptly corrected, an improvement over postal mail that took an undetermined amount of time before undeliverable mail was returned (Dombkowski et

al., 2014a).  Because of the possibility of electronic messages not reaching the individuals, using any type of electronic communication method requires continuous updates and constant verification of contact information on file to avoid using obsolete information.  In addition, there are confidentiality and compliance concerns surrounding providers communicating with patients regarding their health conditions and practices must ensure that patient's health information is protected regardless of the communication method (Baranoski et al., 2014).  EMR functionality includes a secure patient portal in which patients can send and receive communication to and from their healthcare providers.  Because of this feature, some healthcare organizations have moved away from sending billing statements reminder letters by postal mail and technology enables patients to send and receive timely communication electronically (Greer, 2014).

Technological advances, mHealth, and the growing use of text messaging and telemedicine options for engaging patients, are steering the direction for administrators to approach appointment reminder strategies.  Certain mHealth features like text message reminders are more cost effective than automated calling systems but is expanded in some markets to include the development of mobile apps that uses combined methods for sending reminders. Rheumatology patients at an academic health center were encouraged to enroll in the practice's health portal to receive system reminders for appointments. The portal reminder system was linked to the clinic's scheduling system and designed to send email reminders directly from the application and the practice studied the affect that the reminder system had on attendance.  Upon completion of the study, 97% of the patients who received the reminders stated that the reminder system was helpful (Mendel

& Chow, 2017). A limitation to this study was that only 47% of the practice's patients agreed to the participate and the overall no-show rate for the practice was not reported.

Text message reminders sent to patients during a randomized trial yielded a 50% decrease in no-shows for the clinic (Saeed et al., 2018). Text messaging proved to be effective for reminding ED patients of follow-up appointments as a supplemental method to phone call reminders and ED physicians believed the follow-up appointments reduced the risk of worsening patient conditions (Arora et al., 2015). In a randomized controlled trial of appointment adherence in a Cleveland, Ohio pediatric facility, text messages were sent to patients three days ahead of their scheduled appointment while patients who opted out of the text messages received phone call reminders. The no-show rate was lower for the control group who received the text message reminders than those who only received a phone call reminder (23.5% vs. 38.1%) (Lin, Mistry, Boneh, Li, & Lazebnik, 2016). While text messages are effective in some cases, the timeliness and frequency of the reminder contribute to the overall effectiveness. Reminders sent earlier than two weeks prior to the appointment are least effective and can lead to forgetfulness. Yet patients preferred receiving a single reminder rather than a series of reminders leading up to the appointment date rather than sequential reminders (Crutchfield & Kistler, 2017). There were limited studies focusing on whether sequential reminders were less effective than a single appointment reminder.

From most of the literature on this topic, patients are receptive to receiving text messages from their healthcare providers (Edwards, Cini, & Dingli, 2014), enabling frequent outreach to the 6.8 billion mobile users in the world (Kannisto, Koivunen, &

Valimaki, 2014).  Yet a study conducted at Massachusetts General Hospital (MGH) yielded surprising results when some patients expressed concerns about receiving text messages from the provider's office.  In a patient satisfaction survey, some patients preferred text messages (48%) but the majority of the patients (51%) still preferred phone call reminders (Habibi et al., 2018).  In another survey administered at MGH, 69% of patients surveyed were concerned about spam text messages (Percac-Lima, Singer, Chang, & Cronin, 2016).  In addition, researchers were not able to confirm the number of texts that were actually delivered unless the method required a confirmation by return text.  There were also questions of whether older model cell phones were capable of receiving text messages sent from a mass delivery platform.  Some providers were concerned about the security of text messages and worry that texting patients could potentially violate health privacy laws (Kannisto et al., 2014).

Whether one communication method is more effective than another varies by facilities and patient population.  Younger users are more proficient in using technology and it is assumed that they are more likely to respond to text message reminders considering the amount of time spent using mobile devices.  New York City-based community clinics used text messages as an interventional method for sending immunization reminders to pregnant patients during the flu season under the assumption that the texts would be favored among this demographic (Stockwell et al., 2014). Stockwell reported that 89% of the patients favored receiving reminders by text and the study yielded a 15% increase in vaccinations.  Veterans at a treatment center received appointment reminders via their cell phones and using this reminder strategy decreased

instances of no-shows by 25% (McInnes et al., 2014).  Another organization used text messages, in conjunction with phone calls to parents and caregivers of pediatric patients, to manage appointments as part of a randomized trial to determine the most effective delivery method for appointment reminders.  Both phone call and text message reminders were effective in improving attendance and parents showed no favoritism toward either method (Mbuagbaw, 2014).

Various providers have implemented electronic notification methods to engage patients in their own care plans by encouraging wellness initiatives such as vaccination adherence (Dombkowski, Cowan, Costello, Fisher, & Clark, 2014b).  Others used notifications to encourage wellness screenings for cancer and other serious conditions (Kerrison, Shukla, Cunningham, Oyebod, & Friedman, 2015).  And the strategy was used to encourage patients to return for lab testing following office visits and required the patient to respond to the text confirming attendance (Adjei, Agyemang, Dasah, Kuranchie, & Amoah, 2015).  This same type of interactive system also decreased no-shows from 30% to 19% in the Hartford Hospital system (Kaye, O'Sullivan, & Degross, 2014).

Processes that aid in predicting trends which can help anticipate no-shows are beneficial in developing scheduling models that might aid in better utilization of appointment slots.  Industry experts offer strategies to counter no-show behavior.  Setting aside a designated number of same day appointment creates additional access for patients and allows flexibility to fill open appointment slots (Hoseini, Cai, & Abdel-Malek, 2018).  Structuring the appointment templates so that a certain number of walk-in appointments

are available also increases the access to care for acute patients and maximizes the deployment of staff and clinic resources (Qu, Peng, Shi, & LaGanga, 2015). As administrators track no-show rates and observe patient attendance trends, they can identify opportunities to maximize appointment slots by using overbooking methods to meet the demand of acute and same day appointment requests (Schütz & Kolisch, 2013). However, not all organizations favor this method as double-booking methods tend to decrease efficiency and negatively affect patient satisfaction by increasing wait times in the clinic if all patients show up for their appointments (Cronin & Kimball, 2014). There are few studies surrounding the double-booking methodology, particularly surrounding excessive wait times if all patients arrived for their appointments. In one study, researchers reported that the no-show rate fell from 33% to 17% with this strategy and there was no significant increase in wait times and no decrease in patient satisfaction from the use of double-booking processes (DuMontier, Rindfleisch, Pruszynski, & Frey, 2013).

Johns Hopkins Outpatient Center dermatology clinic reduced its no-show and clinic cancellation rates from 25% to 10% by double booking appointments to avoid delaying availability to patients with urgent care needs (Oakley, 2014). While this was a risky method that could have resulted in longer wait times for patients, the clinic minimized the risk of revenue loss by charging a $50 no-show fee for patients who failed to show up without canceling during the 24-hour window. Prior to implementing the no-show fee policy, the practice tried various other efforts to reduce the no-show rate, including reminder letters, automated phone calls, and the double-booking model. Some

experts favor implementing fees to reduce no-shows while others favor strategic scheduling methods.  Implementing policies that charge fees for failing to cancel an appointment within a designated time prior to the appointment enables the facility to recoup the financial loss while curving patient behavior (Popple, 2013).  There are few studies exploring the effectiveness of negative reinforcement such as no-show fees to counter no-show behavior.  Merkel-Walsh (2013) agreed with Johns Hopkins strategy of charging no-show fees in addition to educating patients about the clinic's no-show and cancelation policies.  Merkel-Walsh suggested that organizations should set patient attendance and adherence standards, which should be introduced to the patients when scheduling the initial appointments in order to change future patient behavior.  As a final recourse for repeatedly violating appointment attendance expectations, Merkel-Walsh recommended that the patients should be terminated, or fired, from the practice for not complying with the appointment cancellation policy.  However, practices must follow the law and seek guidance from the state's medical board when terminating the physician-patient relationship to avoid patient abandonment claims.

Community incentive programs in response to patients' reasons for missing appointments can potentially decrease no-show rates.  A New York specialty practice whose population was primarily income, elderly, or disabled patients, provided single-use metro cards for low to help keep their appointments (Kumthekar & Johnson, 2018).  Patient navigators assist with rescheduling patients who could not keep their appointments and answering questions about health concerns if they are medically trained to perform that service.  Using patient navigators to contact the patient prior to the

appointment while serving as a liaison for patients between intervals of treatment has proven to be a successful communication method for some organizations (Luckett, Pena, Vitonis, Bernstein, & Feldman, 2015). Leaders at Massachusetts General Hospital proactively implemented navigators to assist patients with questions about treatment plans which also influenced appointment attendance. Patients who were assigned a navigator at the onset of the program were included in a control group for the study. At the conclusion of the study, there was a 3% reduction in the no-show rate from 27% for patients assigned a patient navigator than for patients who were not part of the control group (Percac-Lima et al., 2015).

With the technological advances to do so, administrators can develop automated algorithms to strengthen the double-booking methodology. Administrators use that technology to implement innovative systems aimed at increasing patient satisfaction while improving clinic performance outcomes. A common practice is to reserve appointment blocks for urgent or walk-in patients, which increases appointment availability for patients and lowers no-shows by filling the projected appointment capacity with walk-in patients (Kurtzman, Keshav, Satish, & Patel, 2018). This block method, along with flexibility in changing the appointment lengths to increase the number of available appointments could minimize loss to the clinic (Huang & Marcak, 2015). Zhang & Kulkarni (2017) agreed that this open access model is an effective way to ensure appointment utilization but cautions that the model often results in increased overtime costs to the expectation is that all patients see a provider once they are accepted. This was the case for a dermatology practice that used a predictive scheduling method in

which an algorithm would use trending data to identify slots ideal for double booking, increasing productivity for many of the providers participating in the study (Cronin & Kimball, 2014). Tsai and Teng (2014) reviewed computerized strategies that took a predictive approach to anticipating patient attendance behavior by predicting cancellations and using statistical analysis of patient trends based on demographics and as well as appointment scheduling factors. Although double-booking was an interventional method for addressing no-shows and the clinic leaders relied on this methodology, the authors determined that overbooking processes often led to excessive wait times in the clinic, particularly for patients with urgent care needs who used the same day appointment process to get care. There are implications for using overbooking and double-booking strategies. When deploying any of these methods, the practice must assess the tradeoff of filling appointment slots with the added potential cost of overtime for staffing resources associated with longer clinic days and the effect on patient satisfaction resulting from wait times (Barghash & Saleet, 2018).

**Kotter's Change Model**

Kotter's change model is a multistep approach to recognizing when a process or system change is necessary and taking the necessary steps to develop and implement those changes. Kotter's model involves eight steps to incorporating change in the organization, which are (a) developing a sense of urgency, (b) building a guiding team, (c) creating the vision, (d) get buy-in by communicating the vision, (e) empowering the team to act by removing obstacles, (f) celebrating short-term wins, (g) not getting complacent, and making the changes stick (Calegari, Sibley, & Turner, 2015). With this

research focusing on exploring strategies for reducing no-shows, this case study includes reviewing methods the organization used to create strategies for reducing no-shows. Kotter's model is a very detailed approach to managing change. The model resembles Kurt Lewin's 1947 three-step change model of unfreezing, moving, and refreezing (Manchester et al., 2014) but with a more complex and detailed approach to managing change. Kotter (2012) explained that leaders using this change model must develop an urgent plan to address the area where change is needed. Farkas (2013) emphasized that following the steps of the model in order is not a requirement but mentions that leadership must understand the existing behavior and culture in order to strategically change it. Zuckerman (2014) suggested using trend data to anticipate changes and develop plans for appropriate allocation of resources. When resources depend on factors such as patient attendance, leaders must monitor changes that may threaten resources and examine the relationship between technology-based systems, such as electronic medical records and clinic operations, when assessing industry uncertainty and competitiveness (Jensen, 2013). Kurec (2014) also mentioned that analyzing the organization's risks and weaknesses should be used as a foundation for developing strategies. Once the organization implements changes, continuous review of processes and celebrating the successes of the strategies along the way keep the focus on urgency and prevent the organization from getting complacent (Pollack & Pollack, 2015).

Kotter's change model has been used in different approaches within the healthcare industry. New York Medical College used Kotter's eight-step change model to successfully develop their recycling initiative and process for the prevention of waste

(Tahara, Burathoki, Gill, & Joseph, 2015).  Minnesota health systems used Kotter's

model to successfully develop the integration of management services across the six

systems (Sorensen, Pestka, Sorge, Wallace, & Schommer, 2016).  The model was integral

in developing a process for nurses to use during patient handoff, designed to reduce

medical errors and costs associated with those errors (Small et al., 2016).  Although

Kotter's change model is not specific to the healthcare industry, the steps in the model are

often used in healthcare organizations to develop quality improvement strategies.

Because this research explores strategic initiatives taken by the practices to improve a

particular operational aspect, steps used by that organization align with Kotter's change

model.

**Transition**

In this section, I provided foundational information on no-shows and the impact

that no-shows have on clinic revenue, operations, and patient care.  The average no-show

rate for primary care clinics in the United States ranges between 18% and 25%

(Kheirkhan et al., 2016).  These no-shows have a negative effect on the revenue of those

clinics, which also has a downstream effect on the clinic's ability to manage staffing

resources and limit the availability of appointments for others.  When patients ignore

their scheduled appointments or intentionally miss the time allocated for discussing their

care and treatment plans, care for others is delayed due to the limited appointment

availability and providers are left with missed opportunities to improve health outcomes.

The purpose of this qualitative case study is to explore the strategies that

administrators can use to reduce no-shows.  I reviewed literature on the reasons for

patient no-shows, strategies tried to reduce no-show rates, and the outcomes of those methods. While there is no single method that has been successful for all organizations, this research is beneficial to administrators because they can learn from the implementation methods of other organizations of similar size and with similar patient populations. Section 2 includes a description of the population for the study, an explanation of the research design method, and details of the data collection technique for this study. The results of the case study are reported in Section 3.

Section 2: The Project

Understanding the reasons for patient appointment nonadherence is an important step in developing strategies to change this behavior.  Through information gathered from the literature on measures that outpatient organizations have taken to increase patient attendance, administrators can learn from the past experiences of others in the industry.  The focus of this study was to explore the factors contributing to the no-show behavior, recognize the impact of this behavior, review the strategies that a local healthcare organization implemented to reduce no-shows, and examine the outcomes of those strategies using the case study method.  This chapter includes information on the study participants for the study, research design methods, and data collection procedures for this study.

**Purpose Statement**

The purpose of this qualitative case study was to explore the strategies that administrators use to reduce no-shows.  This study is beneficial to administrators struggling with efficiency and revenue problems resulting from no-shows.  A case study method enables others to explore the strategies and outcomes of other organizations.  This location for this study was the Las Vegas, Nevada regional area.  The population for the study included clinical managers and administrators, and I selected one ambulatory practice that could demonstrate the strategies for approaching the business problem.  The study could help administrators improve access to care through increased appointment availability for those patients in the community.

## Role of the Researcher

The role of the researcher is to balance the objectives of the study by collecting practical data from participants while balancing one's own practical experiences in the study field (Moreno-Fergusson & Grace, 2016). To be effective in the data collection and analysis, the researcher should have working knowledge and industry expertise in order to develop purposeful interview questions and know the types of organizational documentation to support the research. As an administrator with industry-related experience in the research study subject and as a member of the professional organization from which study participants were solicited, I used my professional rapport with clinic leaders in the industry to seek information about the business problem, coupled with my individual understanding of the business problem, which is an acceptable method for researchers (see Kyvik, 2013). However, McDermid et al. (2014) warned against allowing the rapport to. lead to bias, which can distort the researcher's perspective when analyzing the data. While this was noted, it was important for me to avoid using personal knowledge to make presumptions and fail to collect enough credible data (see Blythe, Wilkes, Jackson, & Halcomb, 2013).

Although there are advantages to having inside knowledge about the research topic, having this knowledge of the research topic may affect objectivity. To ensure the bias was managed, the information collected for this study was gathered directly from the responses of the participants with observation of the participants' emotions (see McDermid, Peters, Jackson, & Daly, 2014). The researcher should also set aside setting aside any personal relationships with the study participants to avoid using personal

information to make assumptions about the data (Fusch & Ness, 2015). Likewise, the researcher must be mindful to manage personal emotions and avoid making assumptions about the participants' emotions (Blythe et al., 2013). I took these risks into consideration during the data collection for the study.

I used an interview protocol (see Appendix A) to include a set of probing interview questions and the anticipated outcome of the study. Hancock and Algozzine (2016) stated that an interview protocol is essential but suggested developing an interview protocol to guide the questions asked of the interview participants. However, Yin (2018) recommended flexibility during the interview and using the participant responses to expand the interview questions for clarification. Asking follow-up questions to participant responses for clarification or further elaboration if needed aids in eliminating information that does not exhibit objectivity (Marshall & Rossman, 2015). Before the first interviews, I explained my data collection process to the participants. Each participant received a consent form in which they indicated their willingness to participate, and his or her responses were recorded before commencing the interview process.

**Participants**

The population for this study was administrators of outpatient clinics and healthcare organizations who have documented successful strategies for improving patient attendance. Selecting a population in which the researcher is knowledgeable is beneficial in understanding organizational processes and helps the researcher to answer questions based on that knowledge and their experiences (Sargeant, 2012). The

population should represent members who possess considerable knowledge of the research topic and represent reasonable access to the data (Maxwell, 2012). For the case study, the organization was expected to have data supporting recent changes in appointment adherence and can explain the strategies used to influence the changes in their no-show rates. The population for the case study included administrators, clinic managers, and other facility leaders within that organization who could provide information relevant to the study. Researchers should avoid using their own organizations for the study to avoid potential bias or conflict (McDermid et al., 2014). For that reason, no members from my organization participated in this study.

I met with members of the Nevada Chapter of the MGMA, of which I am a national and local chapter member, in order to solicit participants for the study. As an active member of the organization, I interact regularly with chapter members through business initiatives and networking opportunities. I provided potential participants with information about the nature of the study as well as my background and experience in the industry during a chapter meeting. If the response to my call for participants had been overwhelming, my plan was to use a screening protocol to gather initial information about potential study participants (see Appendix B). The screening protocol serves as a guide for the researcher to determine the most qualified candidate for the study (Yin, 2018).

## Research Method and Design

In this study, I focused on exploring strategies for reducing no-shows. Qualitative research was the most appropriate method in order to explore a specific business

problem.  The case study enables the researcher to explore a specific problem within a specific population.  The research method and design chosen for this study gave me the researcher the opportunity to gather data from a single organization using tools that provided details about strategies used by that organization.

**Research Method**

This focus of this study was to review the no-show reduction strategies of ambulatory clinical practices to provide guidance to other administrators struggling with the same problem (Yin, 2018).  The exploratory single-case study design method was the optimal method for this study because the aim of the research was to collect data on how other administrators addressed the business problem and the outcomes of their efforts (see Marshall & Rossman, 2015).  The purpose of the study was not to promote one method over another or to design new no-show reduction methods.  Rather, the focus of this research was to explore successes and failures in designs and implementations of experts in the healthcare industry (see Maxwell, 2012).  Using the exploratory qualitative approach, the researcher can determine the phenomenon of no-show behavior and the impact of this trend (Nassaji, 2015).  The case study approach was exploratory and a teaching method that draws from the experiences of administrators for the intent of learning from those experiences (see Radley & Chamberlain, 2012).  Case study research is a general focus on a specific business problem, allowing the researcher to gather data relevant to how the problem was approached in the past (Hancock & Algozzine, 2016).

**Research Design**

When designing the research, I considered other approaches to address the business problem before choosing the case study approach. I explored the ethnographic, psychological, and sociological case study approaches. All approaches incorporated interviews into the data collection but with different analyses. The ethnographical case study approach is often used in healthcare settings where the focus is on a common theme among culturally or ethnically specific groups or where the focus is on relationships between groups in a specific situation (Hancock & Algozzine, 2016). This type of case study would have been ideal if the central focus of the research were to study no-show behavior of a culturally specific population. Much like the ethnographic approach, the phenomenological approach is used in healthcare to explore the experiences of a group in a similar situation (Yin, 2018). This type of research is advantageous when the research is directly related to patient care where consideration is given to emotions and opinions rather than objective data (Green & Thorogood, 2013). Because the purpose of the study was to examine effective ways for reducing patient no-shows, the case study was the most beneficial orientation for healthcare organizations with emphasis on studying demographical and social behavior (see Merriam & Tisdell, 2015).

Using the exploratory analysis approach in research was the basis for examining the no-show behavior trend and the effects felt by healthcare organizations (see Vaismoradi, Turunen, & Bondas, 2013). This approach in case study research design allows a detailed focus on a problem in one system or organization to gain deeper understanding (Cronin, 2014). I developed a list of questions, which were posed to

administrators, allowing them to share their experiences on the strategies they designed to address patient attendance. Open-ended interview questions engage study participants in the discussion and encouraged honest and unprovoked responses (Yin, 2018). In addition, the open-ended interview questions allowed me to engage in conversations with the participant while building a relationship with the participant through that conversation (see Hancock & Algozzine, 2016). I achieved data saturation when no new information was apparent from the interviews with the participants (see Patton, 2014).

## Population and Sampling

This study was designed to be a single case study, allowing me to highlight information about the organization's best practices and overcoming challenges (see Robinson, 2014). Maxwell (2012) mentioned that study participants should represent the group of individuals who can best answer the research questions and who could provide relevant information on the business problem. In order for the study to be successful, participants should possess specific knowledge of the topic and meet the eligibility criteria (Cleary, Horsfall, & Hayter, 2014). Participants, once selected, signed a consent form and then allowed me the opportunity to coordinate interview dates, times, and locations. As the researcher, my plan was to meet with the administrators of the selected organization to collect background information on the clinic and gather data relevant to the management and outcomes of the organization's no-show strategies. The researcher recognizes data saturation when the information remains consistent and no new information is received (Fusch & Ness, 2015). Yin (2018) agreed and recommended being adaptive to the interview question responses and seeking clarifying information and

documenting when no new information is provided during the course of the data collection.  To achieve this, I conducted at least two additional follow-up interviews with the participants to review their previous responses and allowed them an opportunity to provide additional information.  Thus, I achieved data saturation when no new information was evident in the subsequent interviews and when there was no new information in the organization's reports.

## Ethical Research

The ethical responsibilities of the researcher include ensuring the privacy of the organization is maintained and that integrity of the data collected for the study is secured. The researcher should require each participant to give informed consent to participate and assure privacy of the information gathered for the study (Neavyn & Murphy, 2014). McCurdy and Fitchell (2011) reiterated that the researcher also has the responsibility to disguise the identity of the participants.  The identity of the organization as well as the names of the individuals providing responses to the interview questions were shielded for privacy purposes.  As the researcher, I provided a statement identifying any conflicts of interest related to conducting the case study research at the selected organization.  An important factor in research where a healthcare organization is the focus of the study, is protecting patient privacy and avoiding actions that violate patient privacy (Stevenson, Gibson, Pelletier, Chrysikou, & Park, 2015).  Since the study involved an analysis of patient attendance behavior, information retrieved from the clinic's electronic health record was limited to scheduling templates, appointment methodology and attendance

rates only.  This study did not require access to individual patient health records or treatment data.

I obtained Walden IRB approval before meeting with study participants.  The approval number assigned to my study was 03-04-18-0267642.  I also completed all required components of the Human Research Protections training through the Collaborative Institutional Training Initiative (CITI).  To ensure the representatives of the practice were willing participants in the study, all participants expressed their participation by completing a consent form.  In addition, I requested formal approval from the organization's leadership in order to get permission to conduct the case study research and report the findings.  Had the practice required information be presented to their internal review board, foundational information pertaining to the study would have been made available to that governing body for approval before beginning data collection.  Retention and security of study data are important to the validity of the study.  All data collected for the research study are kept confidential will remain in a safe place for a period of five years to protect the integrity and confidentiality of the study participants.  At the completion of the data analysis process, I scheduled a follow-up meeting with each study participant to share the transcript of the interview and clarify the recorded responses.

Because of my background in this field and having worked in a clinical environment, which serves as the setting for this study, I recognized my own biases and personal lens as it pertained to the focus of this study (see McDermid et al., 2014).  Knowledge of the industry was used to guide the data gathering process and personal

experience is used to develop the case study questions.  To ensure the bias was addressed, the information collected for this study was gathered directly from the responses of the participants with observation of the participants' emotions that may represent their personal biases toward the research while setting aside any personal relationships with the study participants (see Fusch & Ness, 2015).  Maxwell (2012) reminded that the researcher should avoid allowing familiarity of the industry or the participating organization to blur the boundaries when collecting the data.

### Data Collection Instruments

The researcher is one of the data collection instruments in case study research (Marshall & Rossman, 2015).  The data collection techniques included semi-structured interview questions, organizational documentation, and direct observation of trends and themes from the organizational documentation.  Data were collected through semi-structured interviews with the opportunity to probe the answers for details and clarity, which was essential to the member checking and data validation process (see Flick, 2014).  Yin (2018) suggested using a set of open-ended questions to guide the interview and discussion with the study participants.  The interview questions included questions pertaining to the organization's document storage, since review of the documents was part of the data collection process (Hancock & Algozzine, 2016).  The interview questions were based on points discussed in the literature review, including: (a) type of clinic and/or specialty, (b) number of appointment slots and current no-show rate in that clinic, (c) reasons for no-show behavior, (d) methods used to reduce no-show behavior, and (e) outcomes of the methods implemented within the organization.  A digital recorder

was used to capture the exchange between the interview and interviewee for documentation and verification of the responses to the interview questions (see Cleary et al., 2014). Interviewees discussed and clarified responses to questions to ensure that the responses were accurately interpreted for the study and ensure validity (see Roberts et al., 2006).

## Data Collection Technique

Maxwell (2012) emphasized the importance of gathering data from multiple sources when conducting case study research. Marshall and Rossman (2015) agreed, citing interviews, direct observation, and review of documents as primary data collection methods when conducting qualitative research. Therefore, the data collection process for this case study included face-to-face interviews with the administrator for the selected organization, a review of the no-show data the organization maintained before and after the strategy implementation, and observation of themes where no-shows are highest such as appointment types or days of the week. Flick (2014) encouraged detailed responses from the participant in order to explore the participant's experience on the topic. This allows the participant the opportunity to determine what information they wish to disclose (Sanjari, Bahramnezhad, Fomani, Shoghi, & Cheraghi, 2014). Asking open-ended questions allows the researcher to observe and document the participant's expression and body language when responding to the questions (Hancock & Algozzine, 2016). These types of probing questions also enable the researcher to ask exploratory questions for clarification of the participants' responses. Marshall and Rossman (2015) stated that allowing the participant to confirm the processed data is an important part of

the member checking process and gives the participant the opportunity to validate the researcher's interpretation of the responses to the interview questions. To validate the translation of the information I collected during the interview and as part of the member checking process, I scheduled a follow-up meeting with the study participants to review the transcribed data taken from the recorded interview session.

## Data Organization Technique

Data collected from the interviews and from observations were initially maintained in notebooks and journals during the collection process. The data collection process also included a review of internal documents and past processes and implementations used to address the business problem, which guided the observation of the organization's processes (see Green & Thorogood, 2013). Hancock and Algozzine (2016) suggested collecting observable data in notebooks labeled by the dates and times of the observation, which is edited and transcribed into digital files for easy reference. Any patient information included in data mined from the organization's internal systems was redacted to protect health privacy information.

At the conclusion of the interviews, the data were organized into a digital system for storage and retrieval. All information gathered for this study, including consent forms, validation information provided by the participants, and hand-written notes were stored for reference. Coding the data retrieved from the interviews using keywords or abbreviations are beneficial in recognizing behaviors that may require additional probing (Marshall & Rossman, 2015). All data collected for this study are secured in a locked file

storage system to preserve the integrity of the data and will be stored for a period of five years.

## Data Analysis

The data analysis included reviewing the information collected through data triangulation by cross referencing the data collected from three different sources for validation, which for this study included semistructured interviews, a review of organizational documentation, and observation of organizational processes, and writing a summary of the findings (Hancock & Algozzine, 2016). To accomplish the data triangulation, initial data were collected through constructed interview questions and later through open-ended in-depth interviews to obtain information from different sources about the same problem (see Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). While the overall purpose of the data collection was to focus on the business problem, information related to the reasons for the problem were essential to the study and was an integral aspect of the research and may be found in the organization's historical documents (Malagon-Maldonado, 2014). Marshall and Rossman (2015) emphasized that the researcher should check one's personal interpretation against the collected data and ensure that no further clarification is needed when summarizing data.

## Reliability and Validity

### Reliability

The trustworthiness of the data requires a review of the participants' credentials to ensure they possess the knowledge and experience to participate in the study and that they are doing so voluntarily (Thomas & Magilvy, 2011). Reliability in the data is

measured by the degree of confidence I have in the responses provided by the study participants (Twycross & Shields, 2005) and by ensuring the study participants each interpret the interview questions the same way (Lewis, 2009). The adequacy of the data gathered as part of the research relates to the whether there is evidence supporting the data and ensuring the participants' interpretation of the questions matches the intended interpretation (Sousa, 2014). In this case, the process included study participants explaining their clinic leadership roles and describing their experiences in managing no-shows. I introduced the focus of the study to healthcare leaders at an MGMA chapter meeting. Yin (2018) stated that construct validity will include a sequential accounting of the data gathered for the study, which is maintained for future reference and to aid in determining any variation in the data. Once I had confirmed participation for the study, I conducted subsequent meetings to obtain data saturation through in-depth interviews with those leaders in addition to collecting data from the organization's files and electronic resources (see Fusch & Ness, 2015).

**Validity**

Transferability of the findings of this study focuses on sharing the information from implemented strategies to assist other practice managers in developing strategies to address a common problem (Marshall & Rossman, 2015). Conducting a case study to review various aspects of the organization by capturing the organizational structure and patient demographic data of the clinic practice, provide a foundational snapshot of the practice highlighted in the study so that readers can make associations between the data presented in the study and experiences in their own clinic practices (Morrow, 2005). As

part of the validation process, member checking can include a review of the interview

transcripts with the participant (Hancock & Algozzine, 2016).  My member checking

process included reviewing copies of the transcripts from the interviews and aligning the

transcripts with a summary of the case study (see Marshall & Rossman, 2015).  However,

member checks are beneficial for triangulating data collected through the interview

process, but the researcher should use other validation processes for observations (Flick,

2014).  The participants provided additional explanations to questions and provided any

needed clarification to information included in the transcript.  As stated by Padilla and

Benitez (2014), interview responses should possess clarity and align with the nature of

the study.  An additional response may be requested from the interview for clarification

based on the participant's response and to make sure the response is being interpreted

correctly (Roberts, Priest, & Traynor, 2006).  The interview process, as well as all other

research data, was written in a way that readers can understand the analysis and the steps

leading to the research outcomes.  Furthermore, the data were presented in a manner that

paves the way for future research.  Data analysis, reliability, and validity was

accomplished through data triangulation and member checking.  I did not use

generalizations in this study since the study findings were guided by theories and the

outcomes may not be transferable to other organizations even though a similar problem

exists (see Marshall & Rossman, 2015).

## Transition and Summary

In Section 2, I explained the research methods for this study and identified the

population for the study.  The purpose of this study was to review the factors contributing

to the no-show behavior, recognize the impact of this behavior, and review the strategies that a local healthcare organization implemented to reduce no-shows and examine the outcomes of those strategies.  I accomplished this using an exploratory case study method and a sociological approach, which is a common method used in healthcare settings where social and demographic behavior are important factors of the data collection technique (Hancock & Algozzine, 2016).  Using this approach, I gathered data from the selected organization through interviews with the leadership, review of organizational documentation, and observation of processes.  The results of the case study are detailed in Section 3, along with details of how the results align the case study with the application to professional practice.

Section 3: Application to Professional Practice and Implications for Change

In Section 1, I provided foundational information about the business problem, the purpose statement, and a literature review related to the impact that no-shows have on clinic operations. I provided a detailed explanation of the research methodology and data collection strategies for this research in Section 2. The content of Section 3 includes (a) an overview of the data collection process, (b) a presentation of the findings, (c) application to professional practice, (d) implications for social change, (e) recommendations for action, (f) recommendations for further study, (g) reflections, and (h) study conclusions.

## Introduction

The purpose of this case study was to explore the strategies that administrators use to reduce no-shows. The central research question was as follows: What strategies do administrators use to reduce no-show rates? The targeted participants for this study were members of the MGMA Nevada Chapter, specifically those members who had leadership responsibilities in their clinics with knowledge of clinic operations and experience monitoring and addressing appointment activity within their practices. The participants were expected to be knowledgeable of clinic operations and their organization's productivity metrics and to have experience developing appointment policies and strategies within their organizations. The data collection included private semistructured interviews with each participant, which were recorded for analysis. I also reviewed internal documents and reports related to the organization's appointment processes and no-show trends.

**Presentation of the Findings**

The research question for this study was as follows: What strategies do administrators use to reduce no-show rates?  Although the primary data collection was participant interviews, the data collection included a document review of the organization's reports tracking patient attendance and an observation of the various appointment processes used by the staff and available to the patients.  Marshall and Rossman (2015) emphasized collecting data from sources in addition to participant interviews.  The direct observation and review enabled me to ask clarifying questions during follow-up interviews and member checking processes.

To solicit potential participants for the case study, I disseminated information about my research during an open forum at a local MGMA chapter meeting, as there had been previous discussions around clinic operations at these meetings.  Two members of the same practice who attended the meeting expressed interest in participating in the study and wanted to highlight their successful appointment strategies.  Their participation was dependent on approval from a member of their leadership team, several of whom were also present at the meeting.  After securing a meeting with the organization's leadership, I explained the focus of the case study along with the purpose of the research and presented the primary research question.  The executive director agreed to sign a letter of participation granting me permission to meet privately and individually with members of his team and permission to review the practice's internal processes as part of my data collection efforts.  Upon receiving IRB approval to begin the data collection, I met with the members of that organization to complete the consent process.

The organization for this case study has three separate practice locations in the local area with a central appointment scheduling team located at the main location. Although the practice has a central model offering specialized services, there are unique scheduling methods among the locations. Because of the differences in the appointment types at each location, the scheduling team used different appointment scheduling models for each of the individual locations. To obtain foundational information about the structure at each location, I conducted private 1-hour individual interviews with two clinic leaders overseeing operations of the three locations to discuss appointment scheduling and no-show activity among the three facilities. The interviews, which were recorded with the participants' consent, occurred at the main practice office, which was the location of the private meeting room outside of the clinic environment and that would not disrupt clinic operations. Meeting at this location was also beneficial to observation of the scheduling team. During the interview process, I used open-ended interview questions to gather information about the types of services provided to the patients and appointment structures at the facilities. Using this interview method allowed me to ask additional questions based on the participants' responses (see Flick, 2014).

### Interview Questions

1. What strategies do you use to reduce no-shows?

2. How are you tracking these data?

3. What problems contributed to the patients' failure to keep their appointments?

4. What strategies did you use to remind patients of their scheduled appointments?

5. How did you capture the results of the strategies you used?

6. What was the difference in patient appointment attendance after using the method or methods tried in your practice?

7. How did you assess patient satisfaction with the methods you have implemented?

8. Are there any other aspects of how you deal with no-shows that would be important for my study?

The organization has three facility locations, which I classified as L1, L2, and L3 for the sake of presenting the study findings. The staffing makeup of the practice included 15 physicians and more than 100 medical support and clerical staff. L1 was the main and largest practice location. This location was staffed for a maximum of six providers in L1 per day. The appointments were set up into 15-minute slots with 180 available appointment slots per day for initial consultations and routine and surgical follow-up appointment types. This allowed each provider to schedule 25 to 30 patients per day at the main location. The appointment template for the other locations depended on a rotational schedule of the available providers and appointment demand for those locations. There were three distinctive themes discovered during the data analysis. Themes are identified by repetitive data covered throughout the data collection process (Guest, MacQueen, & Namey, 2012). The noted themes were appointment booking strategies, appointment reminders, and provider flexibility. There were advantages and challenges to each of these themes identified.

As part of the review of documents, I was given copies of reports generated from the practice management software that was used to monitor appointment trends and other tracked data. Patient identification and health information were omitted from the report and any sensitive data were redacted. The report indicated that the no-show rate was consistently between 15 and 21% collectively between all three locations, although the no-show rates varied at each individual facility. The organization had maintained this no-show rate for 6 consecutive months following recently developed process changes. The no-show rates were automatically calculated from a customized report within the practice management system and generated trend data for all locations but also with the ability to break out the results individually by location. The study participants contributed the individual locations' low no-show rates into two primary strategies: appointment reminders and booking strategies. During a 6-month period from October 2017 to March 2018, L1 had the highest number of appointment slots available for scheduling as well as the highest no-show rate.

There had been several appointment strategies deployed within the practice, including routinely emphasizing the importance of appointment adherence and cancelation policies to the patients. Despite cancelation policies, one strategy that the organization did not consider beneficial was charging no-show fees. Unlike many organizations with strict appointment cancellation policies, the organization did not actively enforce no-show fees at each of its locations. Only one location, L3, actively reminded patients of no-show fees as part of the appointment reminder process. This location offered diagnostic radiology appointments and physical therapy services, in

which the providers were contractors and not full-time providers of the practice. Because contract providers were not held to the same productivity metrics, they would be paid for their service time regardless of whether patients kept their appointments although the practice still had other overhead expenses. No-show fees were enforced at this location for patients who did not cancel appointments at least 24 hours in advance, and patients were informed of this at the time the appointment was booked. To prevent loss of revenue, the no-show policy was aggressively enforced at this location, and fees were charged to the patient's account if not canceled within the required time. Although they were successful at collecting fees at L3, which encouraged patients to cancel ahead of time rather than skip the appointment, the efforts related to this strategy were minimal when compared to the response to their primary strategies and the practice leaders chose not to make this a system wide implementation. Table 1 shows the appointment behavior by location for a single month using the organization's reporting tool, where the no-show rate is consistently <20% but only 5% of appointments were cancelled or rescheduled ahead of time.

Table 1

*No-Show Rates - Month*

| *Location* | In advance | Same day | Total | Rescheduled | No shows | No show rate % |
|---|---|---|---|---|---|---|
| *L1* | 4,962 | 381 | 5,343 | 1,021 | 257 | 17 |
| *L2* | 1,703 | 152 | 1,855 | 349 | 81 | 19 |
| *L3* | 208 | 15 | 223 | 37 | 10 | 19 |
| *Totals* | 6,873 | 548 | 7,421 | 1,407 | 348 | 18 |

**Theme 1: Appointment Booking Strategies**

All of the physicians of the practice had dedicated appointment slots available for scheduling at the primary practice location (L1). Some patients preferred appointments at one of the other practice locations for various convenience factors. However, most physicians preferred LI because of its proximity to the hospital, giving them flexibility in their time between the clinic and the hospital. Busy phone lines posed a challenge for patients who wanted to make changes to their scheduled appointments. As patients expressed their dissatisfaction with the inability to reach a scheduling team member by phone, the no-show rate increased and had escalated as high as 35% the year prior. The practice implemented a strategy giving patients the ability to use a third party online scheduling tool for scheduling and canceling appointments. The tool offered available blocks of appointment slots, allowing patients to choose an appointment time that fits their schedule. In addition, physicians expanded their appointment availability to include appointments, although limited, at one of the other locations on alternating days. The scheduling staff used guidelines for managing the specifics for each location to ensure the patient was appropriately scheduled. These strategies were in response to patient feedback and concerns regarding adverse effects on the practice, which aligned with Kotter's steps for creating a sense of urgency and developing a vision by gaining buy-in from the team to implement the change (see Geyer & Altman, 2016). Kotter (2012) expanded the need for establishing urgency to include examining other market strategies, which in this case led to identifying potential opportunities that may be beneficial to the patients.

**Appointment availability.** For this practice, much like many other practices, the productivity for each provider was measured by the number of patients seen in the practice. As a result, the productivity metrics included a specific number of patients that each provider was expected to see each day in order to reach productivity and revenue goals. The appointment scheduling team was instructed to double and triple book each appointment slot until the number of scheduled appointments for that day was reached. While this booking strategy created longer wait times and sometimes impacted patient satisfaction due to the unpredictable number of patients who may be waiting to see the provider, it minimized the impact of provider productivity by ensuring the providers could fill unused appointment slots and the productivity targets were met. To improve satisfaction scores in other areas, the organization purposely accepted same-day appointments for last minute scheduling, and those appointment slots were also subject to double and triple booking strategies.

Another strategy implementation in direct response to patient feedback requesting more convenient appointment times was extended appointment hours. Prior to the new strategies, the three practice locations operated similar standard hours during the week, with appointments as early as 8:00 AM and the last appointment at 4:30 PM. To increase appointment availability, extended hours were offered on designated weekdays at L1, with early appointments beginning at 7:30 AM and extending beyond 5:00 PM. Saturday hours were offered at L3 for diagnostic testing and therapy services with the same appointment adherence and cancelation policies in place. L2 had modified hours and was staffed by the same physicians as L1 on a rotating basis.

**Challenges.** The double-booking strategy did not work well at L2 because the providers had inconsistent rotation schedules at that location, and appointments were not always available at the patients' preferred times. Although patients were able to schedule last minute appointments and there was more appointment availability, patient satisfaction suffered in other ways due to the extended wait times spent in the clinic lobby. The online booking option was popular among patients. This practice management tool was managed separately from the online tool with no synchronization or integration. Although this option was favored by patients, the tool did not sync with the practice management system and had to be checked throughout the day, causing extra work for the schedulers. The differing scheduling tools had to be manually managed by the practice staff, sometimes creating conflicts with appointments times.

**Theme 2: Appointment Reminders**

The practice used a combination of automated calls and text messages to send appointment reminders to patients, a recently modified strategy in response to patient feedback. No-shows were highest when the practice used only one method, which was a single automated call to patients for appointment reminders deployed closer to the patient's date of appointment. When their process was limited to a single reminder, patients complained that the reminder calls were deployed too far ahead of the appointment date or too close to the date for which they could not rearrange schedules. What the practice leaders discovered was that not all patients received the reminders, voicemails were unrecovered, and patients did not call back to confirm the appointment although the voicemails instructed them to do so. Earlier strategies of single-method

reminders one week ahead of the date of appointment left opportunities for patients to forget.  Single reminders one or two days prior to the appointment left little opportunity for the patient to reschedule if the previously scheduled time was no longer convenient.  Challenges to this strategy intensified when the patient's contact information was outdated, and there was no way to record whether the calls were unanswered.  A new functionality of the practice management system allowed the scheduling staff to send text message reminders to patients if the patients opted for this service in addition to the phone calls.  The lower no-show rates were a result of increased reminders as well as yielding to the patients' preferred method while still utilizing methods favored by the practice.

**Automated calls.**  Previous uses of the automated reminder system required the system to call the patient's phone number documented in the patient's account and play the pre-recorded message.  With the aid of functionality and features available in the practice management software, a two-step method to remind patients of their appointments was implemented.  Five days prior to their scheduled appointments, the patients received an automated telephone reminder with an option to confirm or reschedule.  The enhanced reminder system tracked whether the message was delivered to the patient or if the reminder was unsuccessful due to reasons such as unanswered calls or incorrect phone number.  The patient received a second telephone reminder two days prior to the date appointment.

**Text messages.**  Patients who opted to receive communication from the clinic by text received the second reminder via text message.  The response of the second reminder

was then captured in the practice management software and reviewed as part of the no-show rate report.  Those text messages could also be programmed for delivery on weekends for Monday appointments.  Text messages were favored among patients whose primary phone was a cell phone but who could not readily respond to incoming phone calls.  For those patients, both reminders were sent using the text method.  With further enhancements, patients were able to respond to the texts to confirm their appointments or request a call from the staff to reschedule.

**Reminder reports.**  Reporting data from the practice management software provided a snapshot of appointment reminders by method compared to no show rates. Figure 1 shows appointment data for a single random clinic day in which 193 patients were scheduled.  This chart shows the second reminder made by phone two days prior to the appointment date.  For this appointment, attempts were made to all 193 scheduled patients.  Of those contacted by phone, there were 32 unsuccessful contacts.  Patients who opted for text reminders received a text reminder in addition to the call reminder. The system recorded 132 text reminders sent, with 79 patients (60%) confirming their appointments using the text response.  The unsuccessful contacts and confirmations had no significant impact on the no-shows for this date, with only six no-shows, but with four walk-in patients added to the schedule.
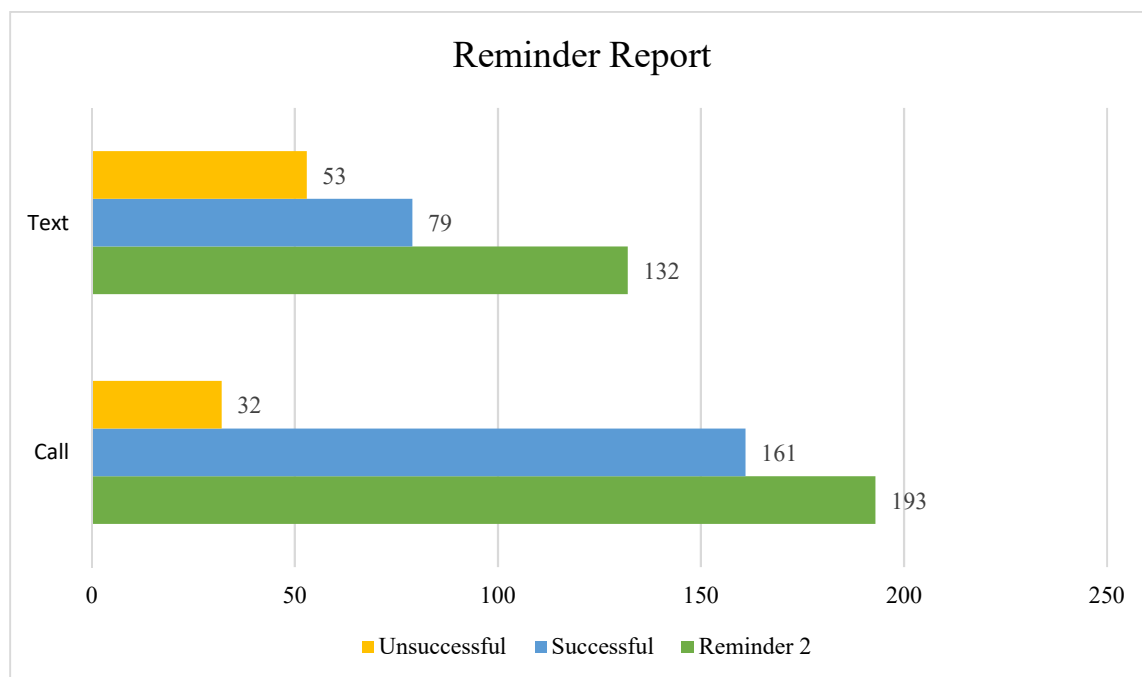
*Figure 1*. Appointment reminder report.

**Challenges.** Although patients favor various appointment reminder methods, practice leaders must ensure that multiple reminders comply with HIPAA guidelines and FCC regulations for contacting patient. The scheduling team were required to verify patients' information during each office visit and at the time of each phone call to and from the patient to ensure correct contact information. In addition to ensuring that methods used to contact patients comply with HIPAA guidelines, the FCC mandates that healthcare providers contact patients no more than three times a week by phone and only one text message is permitted (HIPAA Journal, 2015). Calls made by automated dialers, or robotic systems, had to be monitored to ensure that calls were made only to the patient's primary number to avoid excessive contact.

**Theme 3:  Provider Flexibility**

Kotter recommended engaging the team in the overall vision in order to get team buy-in (Geyer & Altman, 2016).  Collaboration between the providers and the scheduling team was beneficial to strategy implementation.  The providers were open to staff scheduling walk-in and urgent patients in unutilized appointment slots, leading to expected walk-in appointments being integrated into the daily appointment count.  The providers were also receptive to expanding their availability by extending clinic hours to prevent long wait times between appointments.  And the providers were open to seeing patients at any of the other practice locations in order to accommodate the patient.

**Challenges.**  Kotter emphasized empowering members of the team to aid in strategy development and implementation but also emphasizes the need to for seeking new approaches (Farkas, 2013).  With providers gaining more control of their availability and offering accommodations for patients, walk-in patients were sometimes difficult to manage.  Patients were often instructed by the provider to walk in without notifying the staff to expect that patient.  This made it difficult to manage staffing levels and also difficult to classify a patient as no-show when that patient had been given the opportunity to see the provider outside of the scheduled appointment template.  Walk-in and add-on patients contributed to longer than optimal wait times.  As walk-in patients were worked into the schedule, regularly scheduled patients often spent longer times in the lobby waiting to be seen and affected the patients' experience.  Patient satisfaction scores declined between surveys with the primary response being long wait times while at the facility.

**Correlation to Conceptual Framework**

This case study is aligned with Kotter's Change Management eight-step change model, particularly focusing on producing change and response to change (Calegari, Sibley, & Turner, 2015). The specific application to the business problem is: (1) recognizing the effects that no-shows have on clinic operations; (2) developing strategies for improving no-show rates and access to care; and (3) developing a process for continuous monitoring of strategies. As no-show rates increased, the practice's revenue and productivity were compromised. These are influential factors for quickly responding to the risks of negative operational change and enhancing the strategies when necessary (Geyer & Altman, 2016).

Understanding the reason for patients missing their appointments was an important step in developing an effective process to change the behavior. Kotter (2008) suggested engaging customer-facing employees in the strategy development process. The practice leaders followed that model by assigning clinic staff to follow up with patients who missed their appointments and document the reason the patients gave for the no-show. That information was later used to enhance areas of the practice that appealed to the community need. Geyer and Altman (2016) emphasized that Kotter's final step suggests making the change a part of the organization's culture. After each phase of change, practice leaders marketed features such as the extended hours and online appointment booking tool to new and existing patients, acknowledging the stakeholders' feedback and committing to continuous improvement initiatives.

**Applications to Professional Practice**

This case study was designed to identify successful strategies that may provide strategies for implementing processes to reduce no-show rates within their own practices. The findings in this study included three primary themes: (1) appointment booking strategies, (2) appointment reminder strategies, and (3) provider flexibility. Although there were challenges associated with each of these themes, the organization attributed much of its success to routine internal reviews of existing strategies and continuous changes to processes in response to patient need. By reducing no-show rates, administrators may be able to gain better insight into appointment demand, better allocate practice resources, and improve operational efficiency in appointment scheduling and access to care for patients (McLean et al., 2016). The target audience for this study was outpatient practice leaders whose practice sustainability is built on patient appointment and attendance metrics. In addition, the results of this study may be beneficial to leaders of other healthcare facilities by providing information on successful scheduling strategies.

**Implications for Social Change**

The results of this study could increase access to care for patients through better allocation of outpatient appointments by reducing emergency visits (Weiss, Wier, Stocks, & Blanchard, 2014). No-shows lead to improper utilization of appointment slots and limits access to care to other patients. Using online applications to expand appointment scheduling processes for patients could improve efficiency and lead to a savings of $3-$4 per appointment when compared to overall labor costs per hour (Arndt, 2018). This

further leads to patients seeking care in emergency rooms to manage chronic conditions that would be better managed by a primary care provider (Hwang et al., 2015). Better appointment management would enable patients to have access to long-term care management plans for more effective management of chronic health conditions and better population health management. In addition, the need for seeking treatment in the ED for nonacute health conditions would potentially decrease.

## Recommendations for Action

The results of this study might serve as a guide for practice administrators struggling with finding the right strategies to sustain the practice. Administrators can use the strategies identified in this organization to assess the strengths and weaknesses of their own practices. As no-shows increase, the overall productivity of the practice decreases, leading to inefficiencies and limiting access to care when appointments are scheduled but not used. Administrators can benefit by evaluating the functionality of their practice management tool to determine if reporting features are available to monitor appointment trends. They can also use trend data to develop stochastic strategies around seasonality trends related to the weekdays or months of the year when appointment demands are highest (Shacht, 2018). Kotter (2012) emphasized planning for improvements and implementing new approaches. Monitoring reports to identify trends and using metrics to analyze scheduling lead times and other measurable data might assist the administrators in determining future appointment behavior (Moore, 2017). Administrators should consider integration of any new technology with the functionality of their existing EMR, cost, and customer demographics, among other factors, when

deciding to use different technological methods to aid in healthcare management. They would also benefit from frequent assessment of patient response to change measured through satisfaction surveys such as Press Ganey® and engaging the providers in those discussions surrounding changes. This would allow the staff and providers to assess the effectiveness of the changes, aligning with Kotter's change management model of engaging others to lead the change and planning for improvements (Kotter, 2012).

## Recommendations for Further Research

For this study, I collected data from a specialty practice whose strategies were already established and whose strategy includes routine modifications to those successful strategies. A limitation to this study is that the no-show rates and strategies of this type of clinic may not be representative of a primary care or family medicine practice where no-show rates may be significantly higher. Another limitation is that missed appointments in specialty practices may not necessarily lead to a significant increase in emergency visits. However, the loss revenue in a specialty practice may have a more significant negative impact on operations. Future research might include a study of access to care in primary care settings and the impact these strategies would have on access to care as well as appointment behavior in the pediatric clinic setting.

## Reflections

During this study, I reviewed the appointment processes for one clinic practice and the strategies this organization used to reduce and maintain acceptable no-show rates. As part of the study process, I researched journal articles to understand the reasons for no-show behavior in order to develop appropriate and relevant interview questions. I had

conversations with industry leaders for insight into this phenomenon to enhance my understanding of the operational impact of no-shows. Although I felt I was well-versed in this topic based on past experiences in practice leadership role, my knowledge was expanded through extensive interviews with study participants without using my personal experience as comparison. My deepest appreciation was aligning my conclusions with Kotter's theory and gaining insight into how this theory is beneficial in strategy development. Throughout the research and writing process, I learned how to analyze information and delve deeper into available data, which gave me a stronger perception of problem-solving processes. While the overall writing process was complex, I appreciated the consistent constructive feedback from my chairs and the support I received during this lengthy process.

## Summary and Study Conclusions

The purpose of this qualitative study was to use a single organization case study to explore the strategies that administrators have implemented to reduce no-show rates. A review and synthesis of peer-reviewed journals on factors contributing to no-shows, the various impacts that no-shows have on the practice, and strategies for reducing no-shows provided foundational information for the study. The study was aligned with Kotter's Change Model that used an eight-step model for recognizing where changes are needed, using urgency to implement change, and focusing on continuous quality improvement processes. From the data collection process, there were three distinctive themes that enabled the organization to maintain a consistently low no-show rate: (a) appointment booking strategies, (b) appointment reminder strategies, and (c) provider

flexibility. The organization reviews their strategies on a continuous basis in response to patient satisfaction or changes in patient need. This study should provide insight into successful appointment strategies for administrators with growing no-show rates. The study should have a positive social impact by helping administrators improve access to care through improved appointment booking strategies. These strategies should improve patient care outcomes through better appointment management. I would recommend expanding this research beyond appointment behavior in a specialty clinic environment to include primary care appointment types for adult and pediatric appointment types.

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Appendix A: Interview Protocol

Organization Name: _____

Participant Name: _____

Participant's Position in Organization: _____

Interview Questions

1. Describe the services provided at your organization.
   a. What are your clinic's operating hours?  Are weekend appointments available?
   b. How many appointment slots are available during those hours?
   c. What types of appointments and/or services do you offer? (i.e., new appointments, follow-up appointments, consults for surgeries, walk-in appointments)
   d. Are some appointment types only offered on certain days of the week/month?  If so, which ones?
   e. How many providers treat patients at your facility?
   f. How many full time employees work at your facility?

2. What is the approximate number of patients seen in your organization each day/week/month?

3. How many patients failed to show up for their scheduled appointments at your organization in the past week?
   a. How frequently (i.e., daily, weekly, monthly) do you track your no-show rate?
   b. What mechanism do you use for tracking no-shows?
   c. Have you noticed patterns to the days of the week or time of the day in which no-shows tend to occur?
   d. Are missed appointments higher for certain types of appointments (i.e., new patients or surgery consults)?  If so, which appointment types?
   e. Have you noticed patterns regarding no-shows among patients with certain types of health insurance?
   f. What reasons (if any) do patients give for missing appointments?

4. What primary method do you use to remind patients of their appointments? Potential follow-up questions:
   a. Person-to-person phone calls or automated call systems:  How far in advance do you call patients?  How many times do you call the patient prior to the appointment?

    b.   Electronic or mail correspondence:  Explain the process and the system used to communicate with the patient.  Can you provide an example of the type of correspondence sent to the patient?

5.   What is your current process for encouraging patients to keep their appointments?
    a.   What is your cancelation policy?
    b.   How far in advance must patients cancel their appointments to comply with the policy?
    c.   What percentage of patients call to cancel or reschedule compared to those who no-show?
    d.   Are your patients charged a no-show fee if they do not cancel their appointments within that time frame?  How much is the no-show fee?
    e.   Do you remind patients of no-show fee when reminding them of their appointments?
    f.   Do you offer any types of incentives to encourage appointment compliance?  If so, describe the incentives.

6.   Does your organization use an electronic medical record (EMR)?  If so, which EMR do you use?
    a.   Is there a reporting tool in your EMR that tracks missed appointments by patient?
    b.   Does your EMR have an appointment reminder system?
    c.   Does your EMR allow the patient to confirm or cancel patients?

7.   What is your current process for reducing your no-show rate?
    a.   Provide details of this process.
    b.   How long ago did you implement this process?
    c.   What made you decide to choose this process?
    d.   What was your role in the implementation?
    e.   Have you noticed improvements in your no-show rates since the implementation?
    f.   Do you plan to continue with this current process or make changes in the future?

8.   What other processes have you tried in the past?
    a.   Provide details of those processes.
    b.   How long ago did you implement those processes?
    c.   Were there improvements in your no-show rates with the previous implementations?

9.   What questions do you have about this study?

Appendix B: Screening Protocol

Process:  An introduction of the researcher is provided to the participant along with a summary of the focus of the research.  Each participant is asked the following open-ended questions in order to determine eligibility for the case study research process.

Screening Interview Questions

1.  What strategies do you use to reduce no-shows in your practice?

2.  Describe the services provided at your organization.

3.  What is your title and level of responsibility within your organization?  Are you authorized to provide date pertaining to your organization?

4.  What is the approximate number of patients seen in your organization each week, month, or year?

5.  Approximately how many patients fail to show up for their scheduled appointments at your organization in the past week, month, or year?

6.  Has your organization tried any methods to reduce the number of no-shows in your organization?

7.  What was your role in implementing these methods?

8.  Did the methods have a positive or negative outcome?