Adoption and Implementation of the Health Watch Screening Program in Community Pharmacies

by

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ABSTRACT

Biometric screenings are an important first step in the prevention of heart disease, cerebrovascular disease (CVD) and diabetes but accessibility to these screenings can be limited. Community pharmacies are in a unique position as they are highly accessible when compared to other health care settings. The goals of this study are to (a) identify factors that influence community pharmacies to adopt/not adopt biometric screening services and the decision-making processes they utilize as well as (b) explore different models of how screening services are offered and identify infrastructure (including structure and processes) that pharmacies use to ensure long-term sustainability.

Interviews were conducted with key informants from Alabama community pharmacies and analyzed using a form of emergent theme analysis. Study results show that attributes of the innovation and organizational characteristics influence adoption decisions in community pharmacies. This study suggests potential strategies to increase adoption of innovative patient care services. Future research is needed to improve dissemination, adoption, and sustainability of innovations.

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CHAPTER 1

INTRODUCTION

Background

Public Health: Concerns and Prevention

The Centers for Disease Control and Prevention report that heart disease, cerebrovascular diseases (stroke) and diabetes mellitus all fall in the top ten leading causes of death in the United States (Heron et al., 2009). In fact, heart disease is the leading cause of death, ending 616,067 lives in 2007. Stroke and diabetes are not far behind, ending 135,953 (third highest) and 71,382 (seventh highest) lives respectively. When combined, the number of deaths due to these three conditions alone account for nearly 34% of all deaths in the US per year. High mortality caused by heart disease, stroke and diabetes is alarming and thus warrants immediate attention.

The financial burden of the above conditions is very apparent and concerning as well. Costs associated with hospitalizations due to heart disease and strokes are high as an estimated 6 million hospitalizations occur in the US each year. When including health care expenditures and lost productivity from deaths and disability, heart disease and strokes are estimated to cost over $503 billion in 2010 (American Heart Association, 2010). Further, the cost of diabetes continues to rise as well. An estimated 23.6 million (5.7 million undiagnosed) Americans have diabetes. Such a large population is estimated to cost the US $174 billion per year when including medical and indirect costs (National Center for Chronic Disease Prevention and Health Promotion, 2010).

The impact of heart disease, stroke and diabetes is great and this is realized by the US government. As they continue to be a public health concern, *Healthy People 2020* has set multiple objectives for all three of the aforementioned conditions. These objectives focus on primary and secondary prevention as these conditions can be prevented if they are diagnosed early and the proper steps are taken. These objectives include, but are not limited to: a) increasing the proportion of adults who have had their blood cholesterol checked within the preceding five years, b) increasing the proportion of adults who have had their blood pressure measured within the preceding two years and can state whether it was normal or high, c) increasing the proportion of adults with diabetes whose condition has been diagnosed, and d) increasing the proportion of primary care physicians who regularly measure the body mass index of their patients (U.S. Public Health Service, 2009). Based on these *Healthy People 2020* objectives, a biometric screening that includes blood cholesterol, blood pressure, blood glucose and body mass index is an important first step to address public health concerns due to high prevalence and costs of heart disease, stroke and diabetes.

Importance of a Biometric Screening

Hypercholesterolaemia is an independent primary risk factor of heart disease (Lam, Munro, & Siu, 1990). The National Cholesterol Education Program (NCEP) has created clinical practice guidelines for testing and management of cholesterol. These guidelines recommend that everyone 20 years of age or older have their cholesterol checked at least every five years (National Cholesterol Education Program [NCEP], 2002). When diagnosed with hypercholesterolaemia, diet and exercise can greatly reduce a person's risk of heart disease. In fact, for every one percent decrease in cholesterol, a person decreases their risk for developing heart disease by two percent (Cleveland Clinic, 2009).

Hypertension affects more than 50 million Americans and increases these individuals chance of stroke, heart attack, heart failure, and kidney disease (National Heart, Lung, and Blood Institute, 2003). It is recommended that blood pressure be checked regularly using the auscultatory method of measurement and the results of the test should be provided to the patient verbally and in writing. If hypertension is caught early, lifestyle changes as well as pharmacologic treatments can greatly reduce the risk of stroke, heart disease and kidney disease (National Institute of Health, 2003).

Research has shown that in patients with diabetes, the average lag between onset and diagnosis is seven years (Saudek et al., 2008). Fasting plasma glucose (FPG), oral glucose tolerance test (OGTT) and hemoglobin A1c (HbA1c) are tests to measure blood glucose levels that can be used to diagnose diabetes (Saudek, et al., 2008). Early detection of pre-diabetes or diabetes along with appropriate lifestyle changes can greatly improve quality of life to diagnosed patients. In fact, when caught early enough, some people have been able to make the appropriate changes and return their blood glucose levels to the normal range (American Diabetes Association, 2010).

One measurement that is considered to be a good predictor of all three of the previous mentioned conditions is body mass index, abbreviated as BMI (Dettioff & Morse, 2009; National Institute of Health, 2003). This measurement is calculated using height and weight and is used to determine if a particular patient is overweight or obese. As in the previous conditions, high BMI can be approached with lifestyle changes that can result in reduced risk of heart disease, stroke, and diabetes, as well as many other conditions that are associated with being overweight.

While health screenings are important, it is surprising that many adults do not regularly utilize preventive health screenings. In 2003, it was reported that approximately 79% of the population had their cholesterol screened within the preceding 5 years. It is estimated that if this percentage increased to 90% of the population, 2,450 lives could be saved annually (Sanchez, 2007). One reason for this underutilization of beneficial services is the lack of primary care providers; only 27% of Americans ages 18 to 64 report that they have a regular doctor or source of health care (Sanchez, 2007).

Nontraditional Health Care Setting for Biometric Screenings

Accessibility to providers that perform biometric screenings can sometimes be difficult and/or expensive for consumers. As such, community pharmacies are in a unique position to help address this accessibility concern because community pharmacists are highly accessible when compared to other providers in other health care settings (Rosenbluth, Madhavan, Borker, & Maine, 2001). In fact, there are more than 74,000 pharmacies in the United States of which more than 57,000 are community pharmacies (Radford et al., 2009). Many of these pharmacies are located in rural areas where they are the only outlet for health care services. Pharmacists are also, in many cases, considered to be more approachable than providers in other health care settings (Hassell, Rogers, & Noyce, 2000). Ernst and colleagues (1997) found that the equivalent of 250 million people walk into a U.S. pharmacy every week. Because of pharmacists' unique position in the US health care system, a great opportunity to expand community pharmacists' role further as clinicians and implement new patient care services has emerged.

In the ever changing health care environment, pharmacists have begun to transform their role in the health care system from a mere distributer of medications to a clinician that delivers advanced patient care services (Doucette et al., 2006). Community pharmacists are currently looking for ways to reinvent their profession and remain legitimate. In the past decade, community pharmacies have already begun offering patient care services, such as, immunizations, medication therapy management, disease management, smoking cessation, and patient health screenings (Doucette, et al., 2006). By offering these health services, pharmacists can establish a role in improving public health by focusing on the well-being of the community and prevention of chronic illnesses. Pharmacists offering these services also have the opportunity to positively affect public health because heightened accessibility to these services could increase health risk awareness. Another reason that providing health services in pharmacies is important is that it can increase collaboration between pharmacists and other health care providers. This collaboration between providers could help to expand other health services as well as increase transparency of patient records to ensure the highest quality of care.

While the benefits of these patient care services are high and many different patient care services are being offered around the country, the percentage of community pharmacies providing a majority of these services is very low (Doucette et al., 2006). This could be because pharmacies are already struggling with their high dispensing workload, being reimbursed for providing these services, low patient demand for these services, or a number of other reasons. Therefore, a better understanding of the reasons pharmacies offer services beyond dispensing and how they offer these services will be beneficial.

Problem Statement

The prevalence of preventable diseases in the United States is a continuing problem that requires our attention. Mortality caused by these diseases along with the high costs associated with their treatment is a national concern. This is reflected by the US government's continued effort to reduce the prevalence of these diseases by setting goals for heart disease, stroke and diabetes care in *Healthy People 2020*.

Health screenings are a viable disease prevention practice that can greatly reduce the population of undiagnosed Americans. These screenings also have the potential to encourage the diagnosed population to monitor their diseases. The benefits of health screenings that include the measurement of blood cholesterol, blood pressure, blood glucose, and body mass index are great, yet many Americans find it difficult to access and/or afford these services. As a result, the percentage of the population that is regularly screened is low.

Pharmacists and pharmacies have a unique opportunity to provide these beneficial biometric health screenings. With more than 57,000 community pharmacies in the US and the equivalent of 250 million people visiting a pharmacy each week, pharmacies are more accessible than other health care providers. In the past decade, pharmacies have begun offering a variety of patient care services and continue to expand their role in improving public health.

Although community pharmacies that offer health promotion and disease prevention programs can improve the health of their patients and public health, profit from providing these services, and expand and legitimize the pharmacist's role in health care, many community pharmacies are not providing these services. Little is known about why community pharmacies are not providing these services and the factors that influence their decision making processes.

Purposes of the Study

Using the literature related to innovation adoption, implementation and sustainability as guidance, this study focused on the initial adoption and implementation stages. Employing a qualitative approach, this study identified factors that influence community pharmacies to adopt or not adopt pharmacy-based biometric screening services. Second, during the implementation stage, this study explored different models of how screening services are offered and identified infrastructure (including structure and processes) that adopting organizations have put in place to ensure long-term sustainability.

Significance of the Study

This study makes significant contributions to three areas: public health and pharmacy practice, pharmacy-based research, and organizational science research.

The first area of contribution is public health and pharmacy practice. This study identified the factors that are associated with the adoption and implementation of pharmacy-based clinical patient care services. This information may provide a better understanding of the facilitators and barriers to adoption and implementation of patient health screenings in community pharmacies. Policy-makers, educators, and practitioners can use this information to promote the adoption and implementation of patient health screenings in community pharmacies and increase the number of community pharmacies offering these services. In doing so, the pharmacy profession may play an important role in achieving the heart disease, stroke, and diabetes goals of *Healthy People 2020*.

The second area of contribution is this study's ability to advance pharmacy-based research. The majority of current research in adoption and implementation of innovations in

community pharmacies has been focused on the individual pharmacist's impact on the associated processes. This study offers a different view of the adoption and implementation processes focused on the effect of organizational factors. This is an important contribution because organizations, not individuals, have to make a commitment to adopt clinical patient services in pharmacies. Therefore, approaching this phenomenon from the organizational prospective offers a more comprehensive understanding of the adoption and implementation of pharmacy-based clinical patient care services in community pharmacies and may help researchers to develop a more complete and effective framework to understand other pharmacy-based innovations. Further, this study has another important contribution to pharmacy-based research. The majority of current research in adoption and implementation of innovations in community pharmacy is of a quantitative nature. This study applied a qualitative method of analysis that has not been approached as often for this type of research. By using a qualitative method of analysis, this study was able to uncover important processes that current research has not examined.

The third area of contribution that this study yields is its ability to further the research in organizational science. Although there are many innovation studies in various organizations, there is a continuous need for theory development in areas theory is not frequently applied. This study utilized Rogers' Diffusion of Innovations (1995) and Meyer & Goes Model of Assimilation (1988) as guidance and to examine their applicability in pharmacy organizations. Depending on the specific industry, these frameworks and the variables they utilize to help explain the adoption and implementation processes may have different predictive ability in real-world applications. If this is the case, other organizations could apply the findings from this study to make more effective adoption decisions and utilize strategies in the implementation stage that may help to ensure sustainability.

CHAPTER 2

LITERATURE REVIEW

To better understand the phenomenon of adoption and implementation of innovations in pharmacy, this chapter presents a review of the literature in two areas. The literature in these two areas demonstrates the need for more research in pharmacy-based innovative services, as well as guides the direction of this study. The first area addresses the adoption and implementation of health services in general health care settings. The second area explains the adoption and implementation of health services in community pharmacies specifically.

Health Service Adoption and Implementation in General Health Care Settings

Adoption is defined as "a decision to make full use of an innovation as the best course of action available" (Rogers, 1995). Although many believe the adoption of an innovation is a discrete event, research has demonstrated that it is usually a lengthy process. The adoption of an innovation process in an organization is very detailed and occurs primarily in two stages. The two stages are most commonly referred to as the initial adoption stage and the implementation stage. The initial adoption stage is comprised of all the processes an organization goes through that lead up to the decision to adopt. These processes include information gathering, conceptualization, planning, agenda-setting, and matching (Rogers, 1995). The implementation stage includes all the events, actions, redefining/restructuring, clarifying, and routinizing an

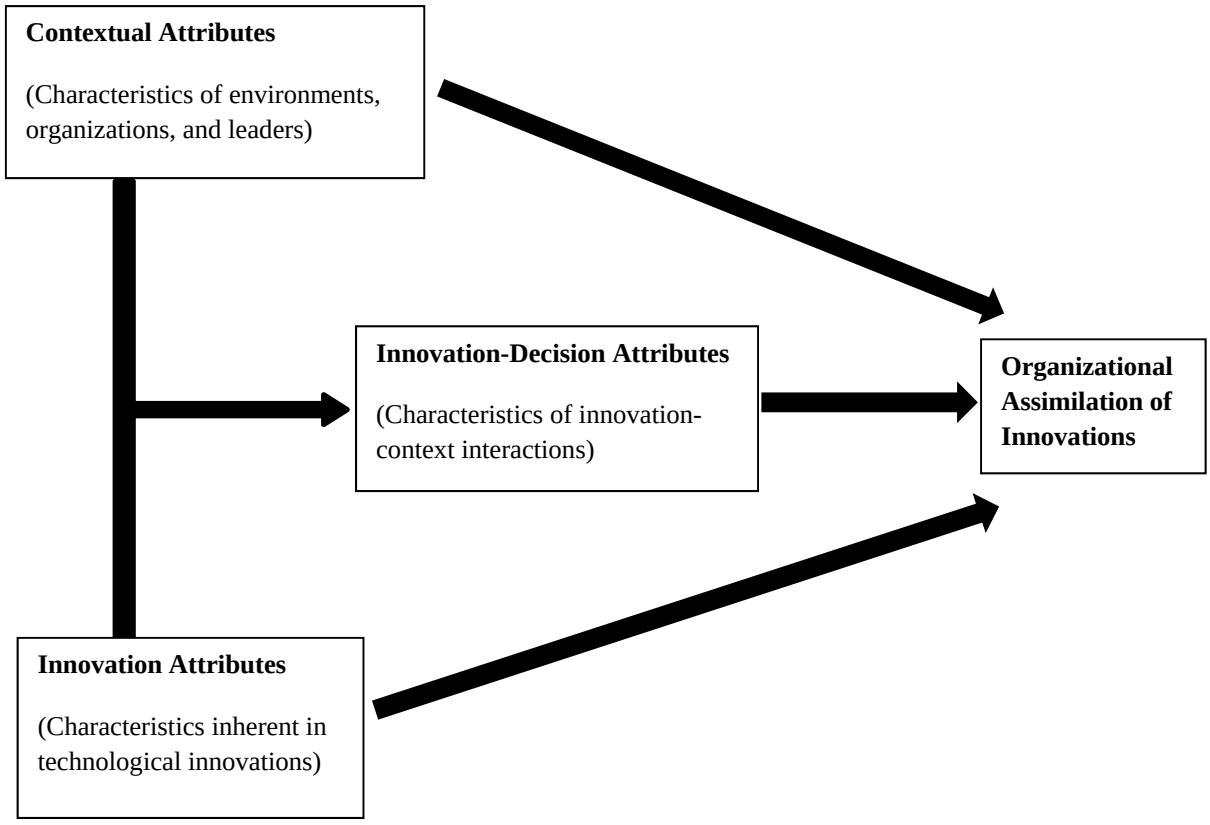
organization must go through to put an innovation to use (Rogers, 1995). These two stages are explained next.

Initial Adoption Stage

The initial adoption stage consists of all the processes that an organization must go through that leads up to the decision to adopt. According to Rogers' model of the Five Stages in the Innovation Process in an Organization, these processes help an organization to create readiness for change by gathering the necessary information about the innovation, conceptualizing the innovation in their organization, planning a detailed adoption strategy, and ensuring the adoption of the innovation will match well with the needs of the organization. Consistent with Rogers' framework, Meyer and Goes (1988) recognize that the decision to adopt an innovation in an organization is more difficult than an individual's decision to adopt an innovation because of the complexity of an organization. If fact, to make a distinction, they use the term assimilation to describe organization-level adoption. They define assimilation as an organizational process that is set in motion when individual organization members learn of an innovation's development which can lead to the acquisition of the innovation, and sometimes comes to the innovation's full acceptance, utilization, and institutionalization (Meyer & Goes, 1988). Meyer and Goes (1988) also suggest in their model of assimilation that the factors that affect the adoption of an innovation in an organization can be characterized into two broad groups [Figure 2-1]. These two groups are known as the attributes of the innovation and the organization characteristics which are highlighted next.

Figure 2-1

Meyer and Goes (1988) Model of Innovation Assimilation



Attributes of the innovation. Meyer and Goes (1988) adapted previous frameworks of adoption of innovations from Ettlie and Vallenga (1979), Zaltman, Duncan and Holbeck (1973) and Rogers (1962). The three previous frameworks examined predictive variables of adoption of innovations, all of which suggest that innovation attributes are important variables to measure. The following section will look specifically at the variables proposed by Everett M. Rogers in *Diffusion of Innovations* (1995) as Rogers' framework has been widely used in numerous studies. Rogers suggests that the attributes of innovations consist of five key variables. They are listed and defined by Rogers as:

1) Relative Advantage – the degree to which an innovation is perceived as better than the idea it supersedes.
2) Compatibility – the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters.
3) Complexity – the degree to which an innovation is perceived as difficult to understand and use.
4) Trialability – the degree to which an innovation may be experimented with on a limited basis.
5) Observability – the degree to which the results of an innovation are visible to others.

These five attributes of the innovation have been shown in research to be the most important qualities of innovations in helping to explain the rate of adoption (Greenhalgh, 2005). In the following paragraphs, findings from health service research that examined the impact of these five characteristics on adoption decisions will be reported. Although each attribute will be

described individually to better understand its impact, it is important to state that these attributes are not mutually exclusive, that is, there tends to be some overlap in the classification of factors.

The first attribute of the innovation is the relative advantage or the perceived benefit of the innovation. Perceived benefit of the innovation refers to the degree of relative advantage an organization perceives they can attain by adopting the innovation. This includes the anticipation of economic growth, social prestige, satisfaction, and the overall perception that the new innovation is better than the idea it supersedes (Rogers, 1995). All innovations are "risky" since they are new and have not been tried by the adopting organization, but if an organization perceives an innovation to be more beneficial than risky, they are more likely to adopt the particular innovation. Many studies that look at the adoption of innovations in health care organizations measure the relative advantage of the innovation and find it to significantly affect the adoption decision (Alkhateeb & Doucette, 2009; Armstrong, Weiner, Weber, & Asch, 2003; Bachman, Marks, & Rimensberger, 2008; Lee, 2004; Randeree, Judd, Kishore, & Rao, 2003). Meyer and Goes (1988) had similar findings in their study of twenty-five US hospitals where the perceived degree of medical risk of a new procedure was highly negatively correlated with adoption.

The second attribute of the innovation that Rogers states will help explain adoption is compatibility or fit of the innovation with the organization. Rogers, along with many other researchers, posits that if an innovation is not compatible with the target organization, the adoption of the innovation will be slow or fail. In health care organizations, compatibility of the innovation with the organization has been demonstrated as an important predictor of adoption of new technology (Alkhateeb & Doucette, 2009; Christensen & Remler, 2009; Putzer & Park, 2010; Tung, Chang, & Chou, 2008), the use of new medications (Abraham & Roman, 2010;

Knudsen, Duchareme, & Roman, 2007), and new programs (Armstrong, et al., 2003; De Civita & Dasgupta, 2007; Rohrbach, Graham, & Hansen, 1993).

Rogers' third attribute of the innovation that predicts successful adoption is complexity of the innovation. Research has shown that innovations that are easily understood and do not require the development of new skills or extensive training have higher adoption rates than more complex innovations. Complexity has been shown to affect the adoption of computerized provider order entry (CPOE) as well as other new information technology innovations (Rahimi, Timpka, Vimarlund, Uppugunduri, & Svensson, 2009). The implementation of new programs and workplace guidelines are also influenced by complexity (Ganz, Yano, Saliba, & Shekelle, 2009; Goud et al., 2010).

The fourth attribute is trialability. Trialability is the notion that if a new innovation can be first experimented with on a trial basis, it is more likely to be adopted. This is thought to be the case because if an organization adopts an innovation on a small scale and it is discovered that the innovation does not reap the desired rewards, it is easy for the organization to cut its losses and abandon the innovation. If the innovation requires adoption on a large scale, it will require more resources and therefore make it more difficult for an organization to commit. Trialability affects adoption of innovations such as technology (Lee, 2004), telemedicine (Al-Qirim, 2007), substance abuse treatment programs (Ducharme, Knudsen, Roman, & Johnson, 2007), and medication use (Abraham & Roman, 2010) in health care organizations.

The final innovation attribute that is necessary for widespread adoption of an innovation is observability. The observability of an innovation refers to the ability for others to see the results of an innovation. If an innovation is highly visible and others see the benefits of the

innovation they are more likely to adopt the innovation. In health care, when the benefits of a particular procedure or program are highly visible, others in similar practice are more likely to adopt. In fact, a study conducted by Denis, Herbert, Langley Lozeau, and Trottier (2002) found that the "over-adoption" of laparoscopic cholecystectomy in four Canadian hospitals was due to the fact that the perceived benefits of the procedure were readily observable while the risks were less visible. Other studies in health care organizations have found that observability strongly influences adoption of new innovations (Abraham & Roman, 2010; Lee, 2004; Putzer & Park, 2010).

Organizational characteristics. Organizational characteristics are the second group of factors that influence adoption of an innovation as seen in the Model of Innovation Assimilation proposed by Meyer and Goes (1988). Organization characteristics refer to objective characteristics (e.g., size, location, ownership, setting, physical space) as well as other less-easily measured characteristics (e.g., internal support, leadership, values, past experiences, and flexibility). When considering objective characteristics, size has been found to positively influence adoption of innovations in hospitals in the US, Canada and Europe (Goes & Park, 1997; Meyer & Goes, 1988; Nystrom, Ramamurthy, & Wilson, 2002). A possible explanation for this is that with larger size, the availability of other influencing factors like finances and human resources will be present (Greenhalgh, 2005). Location has also been found to have an influence on adoption of innovations. Meyer and Goes (1988) found that hospitals that served urban populations were more likely to adopt new innovations than organizations in rural environments. Overall, the findings from analysis of organization objective characteristic factors suggest that large, urban organizations that perform a wide variety of tasks are more likely to adopt new innovations (Greenhalgh, 2005).

Less-easily measured organization characteristics are difficult to summarize due to the lack of consistent measures and definitions of factors. Leadership is examined from a variety of different angles and is thought to have a significant influence on innovation adoption in organizations. It has been suggested that a highly educated leader positively affects the adoption of new innovations (Kimberly & Evanisko, 1981; Meyer & Goes, 1988). It was also shown by Meyer and Goes (1988) that a leader who is influential during the decision-making process and who personally supports or champions the adoption of the innovation has significant impact on the adoption decision. Another measurement of leadership studied by Champagne, Denis, Pineault, and Contandriopoulos (1991) was the leader's degree of satisfaction with the organization's performance which was found to significantly influence an organization's adoption decision. The role of formal leaders is also important to measure because of their ability to create an organizational climate that facilitates innovation adoption (Greenhalgh, 2005). Organizational climate can be defined as the organization's willingness to take risks and experiment with new ideas. To create a climate that favors risk-taking, leaders can display a positive attitude towards change, acknowledge the inherent failure rate in organizational innovation, and develop an evaluation system that rewards risk-taking and learning from failures (Perrin, 2002). Wilson, Ramamurthy and Nystrom (1999) suggested that the ideas of leaders in US hospitals influence the organization's members and help to form the decision for the organization which also set the tone for the future of the organization, hence, positively impacting organizational climate. Overall, a positive organizational climate is an essential part of the adoption process but alone does not ensure commitment to the innovation (Nystrom, et al., 2002).

Implementation Stage

After a health care organization has progressed through the initial adoption of an innovation, the implementation of said innovation is the next stage. During the implementation stage, the innovation is put into full practice which may require a year or more of work to define work roles, train staff members, acquire necessary resources, and try out delivery options (Scheirer, 2005). During this stage it is also important for the innovation to gain administrative and community support (Scheirer, 2005).

The goal of the implementation stage is to ensure sustainability of the new innovation. In fact, many models of innovation adoption and implementation view sustainability as the final product of innovation implementation (Goodman & Steckler, 1989; Rogers, 1995; Yin, 1979). In this study, sustainability is defined as "an innovation's ability to deliver its intended benefits over a long period of time and ultimately become a standard part of everyday business" (Bamberger & Cheema, 1990; Yin, 1979). It is important to examine the sustainability of innovations because the premature termination of effective innovations can be extremely costly to the organization due to the amount of resources and time they have already invested. Not only is discontinuation costly in monetary units, it affects the organization's staff emotionally, as well as the organization's customers who have come to rely on the organization for the services. Much of the research that has investigated the sustainability phenomenon examines the implementation of externally funded innovations. These studies revealed that, despite tremendous benefits obtained from said innovations, they were discontinued after the funding ran out. The cause of this is that the organization, after initial funding, does not have a sufficient plan to continue the beneficial service. Research has shown that although some organizations hope to see their services continue, proper planning that would allow sustainability to occur was

not present and therefore, as a result, costly discontinuation occurs. Although there has been little research done in the sustainability of innovations in health care organizations, Scheirer's (2005) review of 19 empirical studies suggests five important factors that influence sustainability. The presence of these five factors is consistently supported throughout the literature as important factors that influence sustainability. A better understanding of the effect of these factors may help avoid costly discontinuation of beneficial services.

The first factor as listed by Schierer (2005) that has been consistently supported to have important influence on sustainability is the modifiability of the innovation. This notion suggests that in order for an innovation to be sustained over time, it must be able to adapt to meet the new needs of the health care organization (Scheirer, 2005; Westrick, 2010). Scheirer (2005) reported that 12 of 19 studies have shown that innovations that are modifiable are more likely to be sustained. These 12 studies examined multiple innovative programs including heart health (Bracht et al., 1994; O'Loughlin, Renaud, Richard, Gomez, & Paradis, 1998), gerontological health (Evashwick & Ory, 2003), mental health (Glaser, 1981), and community health promotion (Goodman & Steckler, 1989). In fact, O'Loughlin and colleagues (1998) found that innovations that were modified during implementation were nearly three times more likely to be sustained than innovations that were unchanged.

The second factor as listed by Scheirer (2005) that has been shown to have an effect on the sustainability of an innovation is that a "champion" be present. A champion is a well respected individual in the health care organization who acts as an innovation advocate by actively promoting the innovation (Goodman & Steckler, 1989; Shediac-Rizkallah & Bone, 1998). Innovation champions need to have certain attributes that include: mid- to upper-level managerial position within the organization; a sense for the compromises necessary to build

support for the innovation; and negotiating skills (Shediac-Rizkallah & Bone, 1998). In the Scheirer review, 13 of 19 studies have shown that the effect of an innovation champion who strongly advocates for the continuation of an innovation greatly increases the sustainability of said innovation (Glaser, 1981; Goodman & Steckler, 1989; Scheirer, 1990). In fact, Goodman and Steckler (1989) state that sustainability is almost a guarantee if there is a champion present.

The third factor as listed by Scheirer (2005) that has been shown to influence the sustainability of an innovation is the "fit" of the innovation with the health care organization. This refers to the compatibility of the innovation with the organization's mission, values, and procedures (Scheirer, 2005). Studies have shown that when a health care organization and its mission can identify with an innovation, the innovation is more likely to receive internal support and therefore increase the likelihood of sustainability (Glaser, 1981; Goodman & Steckler, 1989). It has also been shown in Scheirer's review that 12 of 19 studies found that the fewer major changes needed for the health care organization to accommodate the innovation and the easier the innovation fits with existing tasks and procedures, the more likely the innovation can be sustained (Goodman & Steckler, 1989; Scheirer, 1990; Shediac-Rizkallah & Bone, 1998).

The fourth factor as listed by Scheirer (2005) that has been shown to effect sustainability of innovations is the perceived benefits of the innovation to the employees or clients of the organization (Scheirer, 2005). In Scheirer's review, 12 of 19 studies have shown that the more employees perceive to benefit themselves or their clients from the innovation, the more likely it would be sustained (Glaser, 1981; Goodman & Steckler, 1989; Lodl & Stevens, 2002; Scheirer, 1990).

The fifth factor as listed by Scheirer (2005) that has been shown to effect sustainability of innovations is the support from stakeholders in other organizations. Studies have shown (12 in Scheirer's review) that when there is support from other organizations in the environment in the form of recruiting new clients or helping raise funds, the innovation is more likely to be sustained (Evashwick & Ory, 2003; Goodson, Murphy Smith, Evans, Meyer, & Gottlieb, 2001; Lodl & Stevens, 2002).

Two other important factors that were not covered in the review by Scheirer that were found to be significant factors in predicting sustainability in pharmacy practice are the integration of the innovation with existing operations and the use of program assessments and evaluations (Westrick, 2010). Studies have shown that when an innovation is incorporated as an integral part of the health care organization's core operations and not as a stand-alone entity, it is more likely that the innovation will be sustained (Evashwick & Ory, 2003; Glaser, 1981). Next, the use of program assessments and evaluations has been shown to greatly increase the likelihood of sustainability of innovations (Evashwick & Ory, 2003). Continuously conducting assessments and evaluations ensures that the innovation is meeting its set objectives (Glaser, 1981; Shediac-Rizkallah & Bone, 1998). When it is not, the continuous monitoring will allow the organization to make the necessary revisions and improvements to the innovation (Evashwick & Ory, 2003). It is imperative that assessment and evaluation are continuous throughout the implementation of the innovation to ensure successful sustainability.

In addition to factors affecting sustainability, implementation processes that lead to sustainability are very important and ever changing. Greenhalgh, Robert, Bate, Macfarlane and Kyriakidou (2005) conducted a systematic review of the literature on diffusion and sustainability of health services in health care organizations. The researchers identified around 1000 full-text

papers and over 100 books that were possibly relevant, of which approximately 500 contributed to their analysis. It was discovered that the evidence on implementation of innovations was particularly complex and relatively sparse. It is clear through the review of the literature that there is little research on the implementation *process* in health care organizations. Therefore, Greenhalgh & colleagues (2005) recommend that future research examine the process that leads to sustainability of innovations in health care organizations. Specifically, they recommend that future research should examine specific innovations and the processes by which they are implemented and sustained in many different contexts and settings to identify where the process can be enhanced (Greenhalgh, 2005).

Health Service Adoption in Pharmacy

While the innovation adoption literature in health care settings is informative and can be used as guidance in developing this study, it is important to review what has been done in pharmacy as there may be different influences not present in other health care settings. Conducting a keyword search wasn't possible as there are few standard terms used in the adoption literature. Instead, to understand what research has been published in pharmacy, a journal search was conducted to identify relevant literature. *Research in Social and Administrative Pharmacy* and the *Journal of the American Pharmacists Association* are considered the primary outlets for innovation adoption literature and therefore were the journals searched. All articles published between 2003 and 2010 that examined the adoption and implementation of pharmacy-based clinical patient care services and identified factors believed to influence their adoption were included. As a result, sixteen studies that identified factors as barriers or facilitators to adoption were included [Table 2-1]. Pharmacy-based clinical patient care services examined were smoking cessation, men's health risk assessment, medication

therapy management (MTM), immunization services, and general patient care services. The studies will be synthesized and analyzed in the following paragraphs.

Table 2-1

Adoption and Implementation of Clinical Services Literature

Authors	**Service Type**	**Study Design**	**Country**	**Source of Info**	**Theory**	**Context**[a]	**Factors**
Ashley, Brewster, and Victor 2006	Smoking Cessation	Cross Sectional	Canada	Survey of 996 Pharmacists	N/A	Real World	Individual: • Tobacco related Knowledge and skills • Attitudes toward smoking cessation • perception of role with smoking patient
Boyle, Coffey, and Palmer 2004	Men's Health Risk Assessment	Cross Sectional	US	21 pharmacies	N/A	Intervention or Trial	Organizational: • Financial assessment
Brock, Casper, Green, et al. 2006	Patient Care Service Documentation	Cross Sectional	US	Survey of 48 pharmacists	N/A	Real World	Organizational: • Electronic Documentation
Bryant, Coster, Gamble, et al. 2009	Medication Therapy Management	Cross Sectional	New Zealand	Survey of 580 pharmacists and 565 Practitioners	N/A	Intention or Perception	Individual: • Clinical knowledge • Readiness for change Environmental: • Mandate • Legitimacy

Feletto, Wilson, Roberts, et al. 2010	Patient Care Services	Cross Sectional	Australia	Survey	N/A	Real World	Organizational: • Business planning • Financial planning • Marketing • Staff management • Pharmacy layout
Kamal, Madhavan, and Cook 2003	Immunization Services	Cross Sectional	US	Survey of 1265 pharmacists	N/A	Real World	Individual: • Willingness to provide • ability to provide • legislative and legal requirements Organizational: • Internal (staff) support • Physical space • Revenue Environmental: • External support • Reimbursement

Kummer and Foushee 2008	Immunization Services	Cross Sectional	US	Survey of 1274 pharmacists	N/A	Real World	Individual: • Training • Knowledge Organizational: • Time • Staff support • Management support • Owner support Environmental: • Physical space • Reimbursement from 3rd parties • Physician support
Law, Okamoto, and Brock 2009	Medication Therapy Management	Cross Sectional	US	Survey of 143 pharmacists	N/A	Intention or perception	Individual: • Adequately prepared Organizational: • Staffing • Time • Physical space • Cost of implementation Environmental: • Different plan specifications • Reimbursement from 3rd parties • Physician support

Lounsbery, Green, Bennett et al. 2009	Medication Therapy Management	Cross Sectional	US	Survey of 970 pharmacists	N/A	Real World / Intention or Perception	Individual: • Sufficient compensation Organizational: • Staffing • Collaborative practice agreements Environmental: • Recognition as a provider
MacIntosh, Weiser, Wassimi, et al. 2009	Medication Therapy Management	Cross Sectional	US	Survey of 200 pharmacy managers	N/A	Real World	Organizational: • Contract with company to provide services
Purcell, Farris, and Aquilino 2006	Smoking Cessation	Pre- and post-survey	US	2 pharmacists and 2 technicians	N/A	Intervention or Trial	Individual: • Knowledge • Counseling skills • Ability to identify patients
Schrommer, Planas, Johnson, et al. Part 1 2008	Medication Therapy Management	Cross Sectional	US	687 pharmacists and managers	N/A	Intention or Perception	Individual: • Training Organizational: • Staffing levels • Dispensing activities • Billing and documentation • Physical space

Schrommer, Planas, Johnson, et al. Part 2 2008	Medication Therapy Management	Cross Sectional	US	132 payers	N/A	Real World	Environmental: • Lack of perception of need by patients • Lack of acceptance by physicians
Westrick and Breland 2009	Immunization Services	Cross Sectional	US	104 pharmacies	Structure-process-output framework	Real World	Organizational: • Champion effectiveness • Modifications made • Compatibility • Sustainability
Westrick 2010	Immunization Services	Non-experimental multistage	US	64 pharmacies: 37 sustainers / 27 new adopters	Rogers' Diffusion of Innovations model	Real World	Organizational: • Staff support • Modifiable over time • Setting (supermarket, chain, independent)
Westrick and Mount 2009	Immunization Services	Multistage mixed mode survey	US	115 key informants of community pharmacies	Rational Choice Theory	Real World / Intention or Perception	Organizational: • Perceived benefit • Perceived compatibility • Perceived complexity

[a]Context: Real World is defined as true adoption studies in which the researcher gathered real-time data and did not influence the respondent's decision making process in any way. Intention or Perception is defined as a study in which the researcher gathers information from respondents to get an understanding of the perceived benefit of an innovation and the willingness of an organization or individual to adopt and implement a proposed clinical patient care service. Intervention or Trial is defined as a study that wants to test the efficacy of and financial gain from a service. The adoption decision is not made by the organization.

These 16 studies are categorized into 3 groups: real-world, intention or perception, and intervention or trial. The context of nine of the studies is considered real-world. For this thesis, real-world will be defined as true adoption and implementation studies in which the researcher gathered data in real time and did not influence the respondent's decision making process in any way. Five of the studies are intention or perception based studies, while two of the studies are intervention or trial based studies. An intention or perception based study is defined as a study in which the researcher gathers information from respondents to get an understanding of the perceived benefit of an innovation and the willingness of an organization or individual to adopt and implement a proposed clinical patient care service. The actual adoption decision and implementation of the service does not occur. An intervention or trial based study is defined as a study of a clinical patient care service that is brought about by researchers who want to test the efficacy of and financial gain from the service. The adoption decision is not made by the organization and implementation of the service is designed by the researchers. There is no promise that the service will still be provided after the study period is completed.

Twelve of the 16 studies used a cross sectional study design while the remaining four were multistage studies or prospective cohort studies. The majority of these studies looked at the adoption decision process at one point in time. Next, the source of information for 12 of the studies was gathered at the individual level. Surveys and interviews were done with individual pharmacists, practitioners, technicians, and payers in these studies. The other four studies gathered information at the organizational level by surveying pharmacy managers and key informants of pharmacies.

Factors influencing adoption decisions are categorized into individual, organizational, and environmental factors. Twelve of the 16 studies examined organizational factors; the

majority of which looked at objective characteristics such as size, workflow, location, etc., of the organization. Although the majority of the studies examined organizational factors, the information was gathered from the individual's perspective. Very few studies examined the less-easily measurable organizational characteristics, such as, the impact of internal support, leadership, compatibility, etc., and even fewer examined them in the real-world context.

Analysis of the identified clinical patient care service adoption literature demonstrates the need for additional research. There is a gap in the current literature that needs to be addressed. First, there is a need for future studies that uncover the process of adoption and implementation of a clinical patient care service over time. Because the processes are very complex and occur over time, future research that uses qualitative methods may help gain a better understanding of this phenomenon. Second, more research that collects data at the organizational level using key informants or pharmacy managers is needed to try to attain a more comprehensive understanding of the adoption decision and implementation processes. Research suggests that by obtaining information from decision makers in pharmacies (key informants, pharmacy managers) we may be able to acquire a more comprehensive understanding of the decision making processes. This is because organizations, not individuals, are the entity that makes a commitment to adopt clinical patient services in pharmacies. Therefore, obtaining information from individual pharmacists may not provide adequate information to understand the adoption and implementation processes. Third, real-world studies that are performed under real-world circumstances are needed. A better understanding of the adoption and implementation processes in a real-world setting may help facilitate adoption and implementation of similar services in other organizations. Finally, research that looks at those less-easily measured (and less-commonly studied) organizational characteristics as well as objective characteristics is needed to

truly understand the adoption decision making and implementation processes. To address this gap in the literature, future studies are needed that examine the adoption decision and implementation processes of one specific program over time.

CHAPTER 3

RESEARCH METHODS

This chapter focuses on the methods that were used to gather data for this study. It describes the research design, the description of the Health Watch screening program, study population, data collection methods, and data analysis.

Research Design

A qualitative research design was employed in this study. Face-to-face or telephone, unstructured interviews were made with key informants of community pharmacies in Alabama that offer or do not offer the Health Watch screening service. Key informants were defined as pharmacy managers or pharmacist-in-charge of the screening service. Questions targeted both the initial adoption stage and the implementation stage. Information gathered from these interviews was analyzed using a modified form of emergent theme analysis. The study protocol was reviewed by Auburn University's Institutional Review Board and was approved as an expedited review minimal risk study.

Emergent theme analysis is an approach used to distill and make sense of voluminous interview data (Wong & Blandford, 2002). Using a modified application of this approach, the ability to systematically identify broad themes initially and then specific factors within them was possible. The process of identifying these themes was guided by Meyer and Goes (1988) Model of Assimilation, as well as Rogers (1995) Attributes of Innovations and Five Stages in the

Innovation Process in an Organization. These frameworks identify innovation and organizational characteristics recognized as important in the adoption and implementation of innovations. Once specific themes emerged from the interviews, the data were categorized as summarized. Details about questions asked and how themes were identified are explained later in this chapter.

Health Watch Screening Program

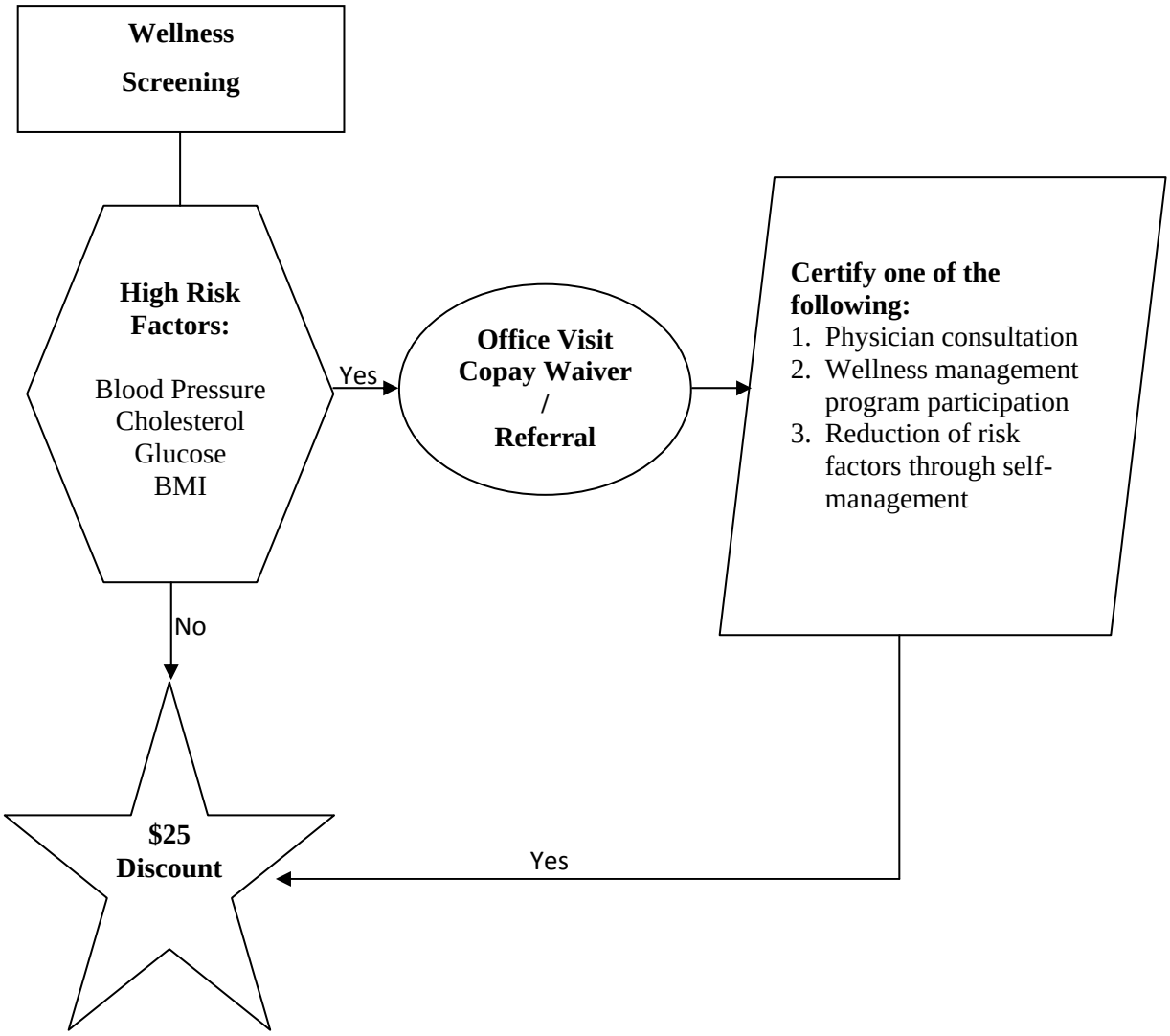
The Health Watch Screening Program has been provided by the Alabama State Employee Insurance Board (SEIB) since 2009. The Health Watch Screening Program is offered to all Blue Cross and Blue Shield of Alabama State Employee Health Insurance Plan enrollees. Thus far, the SEIB of Alabama has offered this program to all primary enrollees in the form of workplace screenings. Approximately 95% of the SEIB's 37,500 active primary enrollees took advantage of the Health Watch screening program in its first offered year. Specifically, the enrollees receive a once a year, free Health Watch screening which measures blood cholesterol, blood pressure, blood glucose, and body mass index (BMI). These clinical measures are important as they are often used as indicators of common chronic diseases including heart disease, stroke, and diabetes. In return for participating, each primary enrollee with normal measurements will receive a $25 discount per month ($300 per year) on their health insurance premiums.

In the case that an enrollee's screening results in an abnormal measurement, they will be referred to a physician for a follow-up appointment. To encourage enrollees to go for a follow-up visit, any clinic visit co-pay the enrollee may incur is waived. If the enrollee can provide documentation of the physician visit, they will then qualify for and receive the $25 discount per month on their health insurance premiums. If the enrollee chooses not to follow up with a

physician, they still have the opportunity to qualify and receive the $25 per month discount on their health insurance premiums by participating in and completing an SEIB of Alabama approved wellness program or by showing improvement in their health-risk factors through self-management. Figure 3-1 shows the process of attaining the $25 per month discount on the employee's health insurance premiums.

Figure 3-1

Process of Attaining $25 Premium Discount



Due to the program's success for primary enrollees, the SEIB of Alabama has decided to extend this opportunity to its 40,000 insured dependents (i.e., spouses) and 18,000 retired employees. At this time, there is no out-of-pocket cost to the dependents or retirees for participating but there is also no additional incentive offered if an employee and their spouse both participate in the Health Watch Screening Program. This new group of 58,000 potential participants establishes the need for a new setting outside of the workplace to provide these Health Watch screenings.

Since community pharmacies are highly accessible, they are potential sites for this screening service in Alabama. Alabama pharmacists now have the opportunity to become trained and certified to provide Health Watch biometric screenings. The training program is offered through the Auburn University Harrison School of Pharmacy in a collaborative effort with Pharmacy Health Services and the Office of Post Graduate Education. The training program is offered multiple times a year to ensure that pharmacists have ample opportunity to participate. The first training was offered in October of 2011. The training announcement/invitation was sent to all licensed pharmacists in Alabama, pharmacists who have taken continuing education through the Harrison School of Pharmacy, and Auburn University Harrison School of Pharmacy alumni. The cost of the training was set at $295. The training includes 10 hours of self-study materials and an online assessment to be completed prior to the live training seminar, an 8-hour live training seminar that includes hands-on skills training and case discussion, and completion of a biometric Health Watch screening practical assessment. To date (July 2012), there have been a total of three training sessions since October 2011.

Upon completion of the Health Watch biometric screening training program, a few steps must be taken to set up the biometric screening program in a pharmacy. First, a Cholestech

testing instrument with a printer must be purchased for approximately $2,200. Next, an Alabama Department of Public Health Independent Reference State Laboratory License (CLIA Certificate) must be obtained at the cost of $200. Additionally, the pharmacy must be enrolled in an annual proficiency testing program which costs $200 for registration and quarterly proficiency testing samples. Finally, known quality control samples, quality control testing supplies, and an optics check cartridge that expires annually must be purchased for a total of approximately $405. Once these purchases have been made and certifications gained, a pharmacist is able to provide this service in any pharmacy in Alabama and receive reimbursement for providing the service to qualified SEIB enrollees (including primary enrollees and their spousal dependents). A pharmacist providing a Health Watch screening is reimbursed $51.30 per patient. Not including initial equipment cost, lab certification cost, and annual quality control costs, the cost to the pharmacist for providing each screening is approximately $16. This results in a net gain of approximately $35.30 per patient.

In addition to training pharmacists to independently offer the Health Watch Screening Program at their pharmacies, another model to provide biometric screening services to SEIB enrollees was also implemented by Pharmacy Health Services (PHS). Pharmacies from around the state were contacted by PHS and asked if they would be willing to allow a pharmacist supplied by PHS to come in and provide the Health Watch Screening Service in their pharmacy. They explained that the pharmacies would only provide the space for the service and all other aspects of the service would be handled by PHS and its outside pharmacists. These pharmacies were not paid for allowing the service to be provided at their locations. This group of pharmacies made up the outsourced adopter group of the study population.

Study Population

The level of analysis was at the organization-level. It was determined that the study population of *pharmacies* and not *pharmacists* would be more appropriate for this research project because the decision to offer this service must occur at the pharmacy-level. The population for this study was community pharmacies in the State of Alabama. Specifically, pharmacies were classified into three categories: adopters, outsourced adopters, and non-adopters. Adopters were defined as community pharmacies that have certified pharmacists who are staff employees and implemented the Health Watch Screening Program. Outsourced adopters were defined as community pharmacies that were contacted by PHS and allowed a screening to be provided in their pharmacy with pharmacists from PHS. Lastly, non-adopters were pharmacies who did not adopt the Health Watch Screening Program. The actual sample size for each group was determined by the saturation point; the point at which no new information or relevance was given to the study.

Selection of the Key Informants

To identify potential key informants for the adopter group, a list of pharmacists who completed the continuing education (CE) program was obtained from PHS. Through pharmacists' contact and employment data, the researcher identified which pharmacy they were representing. Only one key informant per pharmacy was contacted in cases where multiple pharmacists from the same pharmacy were sent to the CE program. There were a total of 27 pharmacist attendees representing 11 pharmacies. All 11 pharmacies were contacted by email and/or telephone communications inviting them to participate in the study. Of the 11 adopter pharmacies contacted, nine pharmacy managers/owners responded to the request to participate in

an interview and be part of this study. These pharmacies served as key informants for the adopter group.

As for the outsourced group, to identify potential key informants a list of pharmacies that were contacted by PHS and allowed the service to be provided by an Auburn University pharmacy resident in their pharmacies was obtained. Key informants were contacted via telephone inviting them to participate in the study. A total of seven outsourced adopter pharmacies were identified using the list that included the name of the resident, location of the pharmacy, and date the service was provided. Of the seven outsourced adopter pharmacies, six managers/owners responded to the request to participate in an interview and be part of this study.

Non-adopters were identified as pharmacies in counties with large populations of state employees that were not offering the service. This was determined as an appropriate method to select non-adopters because these pharmacies had the largest potential patient populations in the state yet they decided not to offer the Health Watch Screening Program. All independent pharmacies in Montgomery, Jefferson, Elmore, and Mobile counties that were not adopters or outsourced adopters were identified and listed. From that list, pharmacies were randomly selected and contacted by telephone and invited to participate in the study. Independent pharmacies were selected because they are most comparable to the other two groups and decisions to offer are made at the site-level (as opposed to headquarters). Of the 22 non-adopter pharmacies that were contacted, ten managers/owners agreed to participate in an interview and be part of this study.

A total of 40 pharmacies were identified and contacted through email and telephone communications inviting them to participate in the study. A recruitment letter (APPENDIX A)

was sent via email to potential key informants. In the case that a valid email address was not available the recruitment letter was read to the potential key informant during a telephone communication. The letter provided information about the study which included the purpose of the research, the reason they were selected, the risk involved in participation, and the incentive they would be offered for participation. After the initial contact was made with the potential key informant via the recruitment letter, an informed consent letter (APPENDIX B) was sent that went into greater detail about the study.

Of the 40 pharmacies contacted, 25 pharmacy managers and/or owners participated in an interview (Response Rate = 62.5%). Of the 25 study participants, two key informants chose to participate in face-to-face interviews while 23 chose telephone interviews. The interviews took place from March to June 2012.

Data Collection

Face-to-face or telephone, unstructured interviews were conducted with key informants (pharmacy managers or owners) of community pharmacies in Alabama. The principal investigator scheduled one hour appointments with key informants to take place at each informant's place of business or by telephone at their convenience. A $50 incentive was offered as compensation for their participation in the hour-long interview. Questions targeted both the initial adoption stage and the implementation stage. Not all questions were applicable to all participants. These questions included:

Questions Related to the Decision to Adopt

1. Who made the decision to offer the Health Watch screening service?
2. What do you hope to gain from offering the Health Watch screening service?

3. What other patient services do you provide in your pharmacy?
4. Is the Health Watch screening service more difficult to provide than other patient services?
5. Do you feel like you have invested a large amount of resources to provide the Health Watch screening service?
6. Do you think offering the Health Watch screening service has any impact on your pharmacy's image?

Questions Related to the Decision Not to Adopt

1. Do you provide any patient care services in your pharmacy?
2. Have you heard about the Health Watch screening service?
3. Do you remember when and from whom you first heard about it?
4. What have you heard about the service and how it works?
5. Do you perceive any potential benefit that could be gained from offering the Health Watch screening?
6. Do you believe offering the Health Watch screening would be more difficult to provide than the other services you provide?
7. What is your understanding of the investment required to provide the Health Watch screening in your pharmacy?
8. What would need to change to encourage you to provide the Health Watch screening in your pharmacy?
9. Who outside of your pharmacy influences your decisions to offer or not offer various services?

10. What is the best way to deliver information to you about opportunities in pharmacy to provide patient care services?
11. What would the information need to say to grab your interest and influence you to adopt a new patient care service?

Questions Related to Implementation

1. Who made the decision of how the Health Watch screening service is offered?
2. Who provides the Health Watch screening service in your pharmacy?
3. How often do you provide the Health Watch screening service?
4. How do your pharmacists feel about providing the Health Watch screening service?
5. Do you offer any incentives to your pharmacists for offering the Health Watch screening service?
6. What adjustments to normal operation did you have to make in your pharmacy to provide the Health Watch screening service?
7. Were these adjustments difficult?
8. Do you plan to make any additional adjustments to better provide the Health Watch screening service?
9. Do you receive positive feedback from other health care providers for providing the Health Watch screening service?
10. Do you receive positive feedback from members in the community for providing the Health Watch screening service?
11. So far, has the Health Watch screening service been successful? Beneficial?
12. Do you plan to continue offering the Health Watch screening service?

These interviews were recorded using an Olympus VN-8100PC digital voice recorder. Key informants' identities remained confidential at all points during the study. To ensure confidentiality, each key informant interview was coded with a random number and kept separately from the identifying code and participant list. Recorded interviews were transcribed verbatim by the researcher for analysis. A total of 29,784 words were transcribed from the interviews. Assuming 250 words per page, the equivalent of approximately 119 pages of interview text were analyzed.

Data Analysis

Information gathered from the interviews with key informants was analyzed using Emergent Theme Analysis (ETA). This method systematically identified broad themes initially and then specific themes within them (Wong & Blandford, 2002). This was accomplished by conducting the interviews using an interview guide to ensure all key informants answered the same questions regarding the same areas of interest. Broad themes defined as similar ideas and concepts reported across interviews, were grouped together by interview question. They were identified and indexed. This allowed the themes to *emerge* from the interview data. Specific themes within each broad grouping were then identified and further categorized according to the specific factors proposed by Meyer and Goes (1988), Rogers (1995), and other factors supported by the adoption and implementation literature. Upon completion of the theme identification, specific factors identified through the analysis were classified as factors considered during the adopting and implementation processes.

In qualitative research it is important to establish trustworthiness of the data collected and the interpretation of the data (Glesne, 1999). The researcher spent a great deal of time talking

with each key informant to build rapport and gain trust in hopes that this would allow them to be more open and complete in their responses to the interview questions. Also, the researcher conducted each interview systematically and repeatedly over varying conditions (Denzin & Lincoln, 1998). For example, interviews were conducted at different times (day/night) in different settings (workplace/home) to ensure these external factors were not affecting key informant responses to interview questions. The researcher also noticed that his attachment to this study may have led him to data that supported his own hypotheses (Glesne, 1999). To reduce this bias, the researcher continuously explored his own subjectivity throughout the analysis. To reduce bias of the interpretation of the interviews, the researcher gave all transcribed interviews to his advisor for interpretation and comparison between interpretations. The researcher worked together with his advisor to discuss the interpretations of the data and resolve any discrepancy in their interpretations.

CHAPTER 4

RESULTS

This qualitative study analyzed key informant interviews to gain a greater understanding of the factors that have influenced community pharmacies to adopt or not adopt the Health Watch Screening Program. The researcher conducted interviews with pharmacy owners and managers of adopting, outsourced adopting, and non-adopting pharmacies. The goal of this study was to learn from experiences and perceptions of the pharmacy managers and use the information to improve dissemination of new services.

This chapter presents the results of the qualitative interviews conducted with key informants from community pharmacies in Alabama. Of the 40 pharmacies contacted (11 adopters, seven outsourced adopters and 22 non-adopters), a total of 25 agreed to participate in an interview and be part of this study. The distribution of the key informants is demonstrated in TABLE 4-1. All adopters and outsourced adopters were contacted; 15 participated in the study. Of the 22 non-adopters contacted, 10 agreed to participate in the study. The researchers stopped seeking additional non-adopters for participation after the tenth interview because no new information was emerging. The distribution of adopter, outsourced adopter and non-adopter pharmacies is shown on the map of Alabama below [FIGURE 4-1].

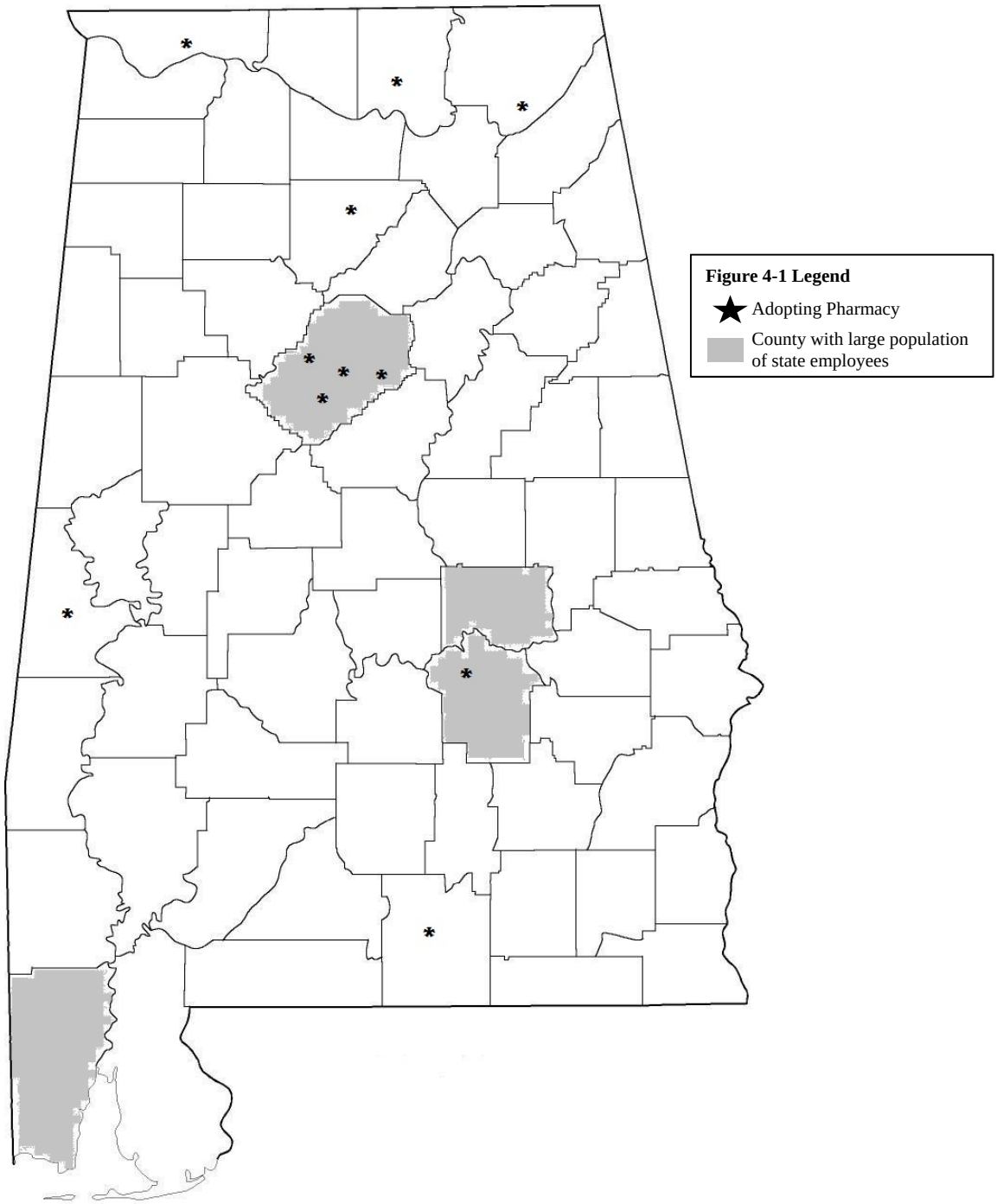
TABLE 4-1

Distribution of Key Informants

Participant Status	**Contacted**	**Participated**
Adopters	11	9
Outsourced Adopters	7	6
Non-Adopters	22	10

Figure 4-1

Geographic Distribution of Adopting Pharmacies



Meyer and Goes (1988) and Rogers(1995) frameworks were used to organize the presentation of the results. Responses from the three groups were compared and contrasted for each factor. Attributes of the innovation and organizational characteristics as described by key informants are analyzed and reported in the following sections.

Attributes of the Innovation

Relative Advantage

Adopters of the Health Watch Screening Program had two major themes emerge regarding the relative advantage of the innovation. These themes were 1) the opportunity to increase revenue by providing the new service in addition to dispensing medications and 2) the opportunity to expand the pharmacist role in health care.

Opportunity to increase revenue. All businesses must be profitable to be successful and the pharmacy business is no different. Repeatedly, adopters have mentioned that the current pharmacy reimbursement for prescription medications is decreasing and therefore pharmacies are seeing the profit gained from filling prescriptions decline. This perception among the adopters was common among the adopters that demonstrated what they hoped to gain from providing the service. One said, “Ultimately money. I do things because hopefully they will result in profit for us.”

In addition to carefully evaluating potential benefits, it also appears that owners of adopting pharmacies often scan the environment and seek innovative ways to generate additional revenues. One pharmacy owner stated:

The biggest factor in making the decision (to provide the service) was that we need new and innovative ways to generate revenue. The pharmacy reimbursement landscape right now is pretty poor and pharmacies are seeing profit margins on their prescriptions decrease and I'm not one to sit around so I decided we were going to seek out new and innovative ways to generate revenue at our store and this is one of the ways we saw to do it.

Another reason adopters saw a great advantage in the Health Watch Screening Program was the low initial investment the program required. Because of the low initial investment, the potential return on investment was seen as high. An example of this common feeling towards the program is when one owner stated:

I think it's (the Health Watch Screening Program) a very small investment…Let's say it's a $5000 investment but it has very high return so from a financial model it makes financial sense.

Another owner explained:

We are realizing a return on investment very quickly. In fact, we did a financial analysis yesterday…We did make an investment but my thing is I'll spend whatever it takes as long as there is a tangible ROI in a reasonable amount of time…we're two screenings in and we're already almost at the break-even point.

Opportunity to expand the pharmacist role in health care. Pharmacists are trained and have the knowledge to provide patient care services but traditionally the reimbursement for such services has made justifying spending the time on these services difficult. Adopters seem unnerved by this and more willing to provide services to expand the role of the pharmacist in health care. This commitment to the profession seems to be prominent among the adopters. For example, one adopting owner stated:

This is what we've been waiting for since we graduated from pharmacy school in 1983 and now it's finally a reality…We have this knowledge but it's hard to share knowledge with patients unless you have a program that generates results that you can physically hand them that they can hold and see this is gonna make a difference.

Another owner commented:

I hope the things we do in programs like this would create an awareness of the value of the pharmacist as far as being able to manage and control health care costs and having pharmacists involved in the health care system can actually have a positive financial impact.

Most adopters felt the opportunity to provide the Health Watch Screening Program in their pharmacies was finally a step in the right direction for the pharmacy profession. They have a common goal to "utilize clinical skills and professional knowledge rather than be associated with product and process" and to "advance the profession and the care of patients." Adopters also felt that providing this service in the community to their patients would be a great benefit. An example of a comment made by an owner that blends the benefit of providing patient care and opportunity to increase revenue was "We love patient care and we like money so if we can merge the two, we're all about it." This shows that while revenue is important, the real underlying advantage they see from offering the service is the ability to provide patient care in the community.

Outsourced adopters viewed the relative advantage of the Health Watch Screening Program differently from the adopters. Neither the commitment to the profession regarding the expansion of the pharmacist's role nor the opportunity to gain additional revenue were as visible in this group. Instead, the majority of the pharmacy owners who outsourced this service shared

one common theme regarding the relative advantage of the Health Watch Screening Program. This common theme was the opportunity to increase visibility of their pharmacies. When asked what the owner hoped to gain from allowing the Health Watch Screening Program to be provided in their pharmacy, one owner stated that he/she offered the service to "increase the visibility" of their pharmacy and "get as many people in here as we can just to get us noticed" while another owner offered the service to "get our name out there" and considered offering the service "free advertisement." Outsourced adopters also viewed the cost to provide the service as a restraint. One owner stated:

…I'd have to invest in the cost of the Cholestech and the scales and everything…I'm not certain I'd be able to bring in enough people to offset the costs.

Another outsourced adopter who was considering providing the service with his/her own pharmacy personnel explained how he/she viewed the reimbursement from the Health Watch Screening Program:

It would take more time than an immunization but not as long as diabetic shoes. However, the diabetic shoes are worth it because you get reimbursed $150-$200 on each pair that is covered. With this, the profit is what? $20 or $25? That's only about as profitable as a pneumococcal immunization.

In summary, outsourced adopters see the indirect benefits that are gained from providing the service but view the direct benefits seen by the adopters in a different light.

Non-adopters saw some advantages to offering the Health Watch Screening Program but decided against offering the service at this time. When the interviewer asked them to elaborate on the benefits, interestingly, instead of describing the immediate benefits, such as, gaining

additional revenues like the adopter group, they seemed to focus their attention on indirect benefits of increasing patient use of the pharmacy for their prescription needs. For example, one owner stated that if he were to provide the service in his pharmacy he would "just about lock patients in to wanting you to take care of them and whatever pharmaceutical needs they have." Another mentioned that it could be a way to "get patients to come over to my pharmacy" and that other pharmacies in the area might "take my customers away" so offering the service would keep that from happening. Similar to outsourced adopters, non-adopters see the relative advantage of the Health Watch Screening Program differently than the adopters. They overlooked the direct benefits of reimbursement for providing the service because they feel they don't have a large enough patient population, the reimbursement would not be sufficient for the amount of time required to provide a screening, or in some cases they don't trust they will actually be reimbursed.

Compatibility

Adopters of the Health Watch Screening Program had two major themes emerge regarding the compatibility of the innovation with their organizations. These two themes were 1) the pharmacy layout was conducive to these kinds of services and 2) they are already providing other patient care services in their pharmacies. These two themes are explained in greater detail below.

Pharmacy layout. A change to pharmacy layout can be seen as a barrier to adoption of new patient care services because of the cost and time associated with any renovation. In general, adopters of the Health Watch Screening Program saw the new service as compatible

with their current pharmacy layout. This was because the majority of these pharmacies were already designed with a private patient counseling area. One key informant stated:

Physically our pharmacy is already equipped with a private counseling room so there is no need for any renovations at this time.

Another key informant mentioned "changing the counseling area" to better accommodate the service in their pharmacy but that the change "didn't cost anything" and that they "already had a counseling area" but wanted to make it more practical.

Current provider of other patient care services. Pharmacies that currently provide immunizations, medication therapy management, smoking cessation, and other patient care services find the Health Watch Screening Program compatible with their pharmacy. In fact, the majority of adopting pharmacies provide extensive immunization programs and at least two other patient care services. When asked what patient care services are provided in a particular pharmacy one owner replied:

We currently offer a full service immunization program…flu, pneumonia, and Zostavax primarily. We are venturing into some other adult vaccines…most notably travel vaccines but also yellow fever vaccine. We are also implementing a comprehensive program to counsel people about their immunization schedule and what they might be due for at certain ages. We also have a comprehensive accredited diabetes education program. Of course we do MTM and get reimbursed for that as well. Lastly, we have a medication adherence program to improve patient adherence by synchronizing their medication refills and meeting with them when we see gaps in therapy to see if there is anything we can do to help them with their medication. I guess that's about it.

Not only did the majority of adopters provide at least three patient care services but all adopters provided at least two very comprehensive services. This made a new service such as the Health Watch Screening seem compatible with the other services they already provide which in turn made the decision to adopt the Health Watch Screening Program an easy one.

Similar to the pharmacies that adopted the Health Watch Screening Program, the majority of the outsourced adopting pharmacies also offered patient care services and had space to provide the service. Although parallels can be made between the adopting and outsourced groups, differences are also apparent. One outsourced adopter stated:

The only thing else we do is flu shots and again we bring in an independent organization that administers flu and pneumonia shots.

The outsourced model (using an independent organization, as opposed to their in-house staff) used by outsourced adopters is vastly different from the in-house model used by the adopting pharmacies to offer immunizations. Also, when asked about patient care services, outsourced adopter pharmacies often mentioned "compounding services," "community outreach," and "delivery service" as examples of services they provide. This demonstrates a large difference in the description of patient care services between the outsourced adopting pharmacies and the adopting pharmacies as these services are more aligned with dispensing activities as opposed to patient care services in which reimbursement for services can be gained.

In contrast to adopters and outsourced adopters, non-adopters were generally not providing patient care services in their pharmacies. A few mentioned providing immunizations but for the most part, patient care services were not the focus of these pharmacies. These

pharmacies perceived the Health Watch Screening Program as incompatible with their pharmacy business because the focus of their pharmacists is dispensing medications. One owner explained:

Outside of filling prescriptions…I mean, that's basically it…we are a retail pharmacy. I mean, if someone needs their blood pressure taken, certainly I'll take it. If they need counseling about something I'll do that too…

Similar to the outsourced adopters, they also mentioned "delivery service" and "thirty day charge accounts" but explained that they did not currently have an "actual program" or patient care service that they provided on a regular basis. The majority of non-adopters did not offer other services and therefore the new Health Watch service was not seen as compatible. This incompatibility may be an important factor preventing them from adopting the screening program.

Complexity

Adopters generally regard the level of difficultly associated with providing the Health Watch Screening program as low mentioning that "offering the service isn't more challenging than providing an immunization." The perception that the Health Watch Screening Program is not difficult to administer has led them to adopt the program. It is also important to mention that they felt this way (not being difficult) due to the fact that they were familiar with various types of patient care services currently offered in the pharmacy. One owner stated:

I don't think it's more difficult than our other services. We have done a few of them (offerings of the service) and it's pretty easy. It's time consuming… but it's not difficult.

Although adopters feel that providing the service is not complex, the amount of effort required to get to the point where the service can be provided is viewed differently. Multiple pharmacy owners described the steps to attain a Clinical Laboratory Improvement Amendments (CLIA) certificate of waiver were difficult. One owner felt the service was "more difficult (than other patient care services) because you have to get (laboratory) licenses and you have to fill out an inventory and you have to purchase (equipment) and you have to get credentialed so it's more difficult" but felt that actually providing the service was not complex in nature.

Interestingly, the outsourced adopters viewed the program in a different light when it comes to complexity. A major theme emerged when discussing the difficulty associated with providing the Health Watch Screening program in outsourced adopting pharmacies. The time it took to provide the service made this service too complex and therefore undesirable. This theme was expressed by the majority of outsourced adopters as the reason they would rather bring outsiders in to offer the service than provide the service with their own resources. In contrast to adopters regarding the possibility of staffing additional personnel to help with dispensing activities to accommodate the new service, the outsourced adopters did not mention a possibility of having additional personnel. For example, one owner stated:

I believe it would be (more difficult) because I am a one man pharmacy…If I were a two person pharmacy I think it'd be a good asset but just being a single man pharmacy I don't think I have the time or resources to do it on my own...

Other owners had similar feelings regarding the difficulty to provide the service stating:

As busy as we are in that setting, it's difficult to have enough waiting space as patients are waiting to have their prescriptions filled and adding more people waiting to be screened would be too much in that retail setting.

In general, owners that outsourced the service felt that the amount of time required to provide the service made the service too complex for their pharmacy settings.

The majority of non-adopters did not feel that providing the service would be more difficult than providing other patient care services. A few owners mentioned the amount of time required to provide the service as a drawback, as well as, not knowing where to get information regarding the "machinery" (Cholestech) but overall, non-adopters didn't think it would be hard to provide the Health Watch screening. One owner stated:

Well, maybe it would be a little bit (more difficult than other patient care services) because you're not set up to do that… You have to have an area set up to do it… but I guess you could use your counseling area right? I mean, I guess it wouldn't be difficult.

Other non-adopting owners were very confident in their ability to provide the service responding to the question, "Do you think this service would be more difficult to provide than other patient care services?" with a simple "No" or "I don't think it would be hard at all" and "I think it would be very doable."

Trialability

Two themes related to the trialability of the Health Watch screening program were discussed with adopters including the low initial investment and ability to experiment with different methods of service delivery.

First, the cost associated with adopting and implementing the service was considered low among the majority of adopters. This was discussed previously as an advantage seen by the adopters but is included here because it allowed them to experiment with the program. Low costs allowed adopters to make a decision to offer the program without too great of a financial commitment. To repeat a previous example of this, the following comment in which one owner stated:

I think it's a very small investment. There is a time investment as far as thinking about how to pull it together but as far as financial, for this program let's say it's a $5000 investment but it has a very high return so from a financial model it makes perfect sense.

Another owner elaborated on how low investment this program was. This individual compared the money spent on advertising and the investment cost for this program. He/she said:

People won't flinch about spending $3000 to put an ad in the paper but they won't spend it to do this? I just don't get it.

Along those same lines, a third owner discussed the amount of money required to provide the service as low and even expressed their skepticism regarding how others made their decisions. He/she stated:

If someone tells you they can't provide this service because of cost, they've got another reason they just aren't telling you about.

Adopters also talked about the multiple models and possibilities to deliver the service. The ability to try different methods of delivery and alter how the service is ultimately provided

was very appealing to adopters when making their decisions to offer the service. One owner stated:

Right now we are offering the service as a clinic twice a month. It seems to work well but if demand goes up we may offer it as a walk-in service. We'll have to wait and see. It's definitely a possibility.

Another owner stated:

We may try a variety of different things…I'll know more once we get into this and see what kind of response we get. We'll try things and see what works and change it up and see what's next.

Another example of trailability among the adopters was observed in the number of pharmacists each pharmacy sent to become trained and certified as well as the amount of equipment each pharmacy decided to purchase. The majority of the pharmacies that adopted the Health Watch Screening Program did not send all of their employed pharmacists to the continuing education program. For example, one owner stated:

I have 3 pharmacists and two of us are certified to know how to do it so as long as one of us is here we can do it.

By only getting a few of the pharmacists employed by a particular pharmacy certified, these adopter pharmacies are evaluating how the service works on a trial basis. This is also seen in pharmacies that have multiple locations. For example, one owner explained:

It (the Health Watch Screening Program) will be (provided) at our main location because we'll have all the equipment there…and then when we have it at another location we will move the equipment there.

Instead of purchasing all the necessary equipment for each pharmacy location, adopter pharmacies have decided to purchase one complete set of equipment and move it to their multiple locations when necessary. This allows the pharmacies to provide the service on a trial basis without the fear of losing a large investment.

Owners of the outsourced adopter pharmacies did not have to invest any resources to allow the pharmacists to come in and provide the screening. In essence, the fact that these outsourced adopter pharmacies could allow an outsider to come in and provide the service is the definition of trialability. The trialability of the innovation was demonstrated through the ability of the service to be provided without any investment (other than the space provided) or effort and therefore no questions were asked of the outsourced adopters regarding the trialability of the service.

When discussing the Health Watch screening program with non-adopters, owners meddled with possibilities for providing the service but came back to the perception that the time needed to provide the service may be too great which prevented them from offering the program. This perception may in fact hinder them from being interested in even trying the program. An example of one owner's thoughts:

You know, unless you just really commit yourself to doing that and you network with physicians and spend the time to do it right and I'm so busy on any everyday basis right here behind the counter filling prescriptions that it's hard to do it.

This shows that the perception of this program from a non-adopter is that in order to provide the service and it be successful, the pharmacy would have to fully commit to that program and that program alone. The non-adopters do not see the possibility of experimenting with this new

service and perceive the time it would take would not be worth the effort. Another owner explained:

We could probably arrange to have an extra pharmacist there for a short period of time if we've got it set up to where we could get them back to back to back…

Overall, non-adopters were worried of the time required to provide the service but also came up with ideas of how the service could be offered in a time efficient way or with the help of an additional pharmacist to make it still a possibility.

Observability

One theme that emerged from the interviews with the adopters was the positive impact they felt providing this program could have on their pharmacy's image. One owner explained:

I think it has given the pharmacy more exposure and give the community the perception that this independently owner pharmacy is more than just a place to get prescriptions filled but a pharmacy can also give valuable information and provide services.

Other owners had similar responses when asked about the possible impact on the pharmacy's image. For example:

I think being able to offer these services to Health Watch patients or other patients who walk in and want to have their cholesterol checked is a really good opportunity to show the community what else pharmacists can do.

Others mentioned offering the program gave them "more exposure" and "helping the public to see that we can do whatever we need to do to meet the needs of the community". Overall, adopters felt providing this program would be observable and have a positive impact on the

pharmacy and pharmacist image in the community. This was consistent with the perception related to the benefit presented in the previous section.

Another benefit of offering the Health Watch Screening Program is the advertising that is sent out to all state employees in the area where an adopting pharmacy is offering the program. Adopters mentioned this as a great way to get the word out. One adopter stated:

We can take advantage of the SEIB marketing plan that there is going to be a screening at this place…and see what kinds of responses we get.

Another also mentioned the state "putting a mail out or a flyer" to the potential customers in the area and felt that this advertisement of the program by SEIB was a positive tool to increase the program's visibility.

Outsourced adopters had similar responses to questions about the impact the program had on their pharmacy's image. The majority felt that offering the service increased awareness of the services pharmacists provide as well as brought in new potential customers. One owner stated:

I can't say I gained any customers from it but you know, by bringing people in you always open up that possibility… I would say it enhanced our image and you know, I guess it got our name out there and maybe there might be somebody that was new to the neighborhood or something and maybe didn't know that we were here…

Another owner said:

I think it was good (offering the service) because it showed people the value of having the service in the pharmacy where it's easy to come in and have that service performed.

Other outsourced adopters mentioned that offering the service "shows that we are proactively trying to help patients in the community" and "offer services that no other pharmacy in the area is doing" which they felt impacted the image of their pharmacies as well as the pharmacist profession.

Very few non-adopters mentioned observability as a reason for providing or not providing the Health Watch Screening Program in their pharmacies. One non-adopter stated:

If there's not that many people doing it and then they are looking up who is providing it and they see my pharmacy and they come in and they didn't even know I existed before that then I guess I can see a benefit there.

This was the only mention of observability of the program among non-adopters. Because they have not provided the Health Watch Screening Program or received all the information about the program, they may not be able to answer questions about observability. Also, the Health Watch Screening Program is so new that the innovation has not been observable by a majority of non-adopting pharmacy owners.

Organizational Characteristics

Based on pharmacists' responses, three characteristics of organizations seemed to be different among adopters and non-adopters. This section of the results focuses on three organizational characteristics: 1) organizational innovativeness, 2) organizational connectedness, and 3) new program sense-making.

Organizational Innovativeness

Based on (Rogers, 1995) concept of organizational innovativeness, this study defines organizational innovativeness as the level of the active seeking of new innovations to implement in one's practice. Adopting organizations seemed to be more innovative in patient care activities than both outsourced adopter and non-adopters. An example of a statement made by an adopter during the interview was:

I find some sort of satisfaction in being a trailblazer on the forefront of stuff like this.

Comments like this were not rare. The majority of adopting organizations had similar feelings about new innovations in patient care and felt that being the first to adopt a new patient care innovation was important to them not only for personal satisfaction but to stay ahead of the competition. One adopter stated:

Pharmacy has evolved and the landscape has changed and you're either growing or you're dying. You can't sit back there with a typewriter or a dot matrix printer doing the same thing you did 10 years ago…or even 5 years ago…

The above comment illustrates the importance adopters put on keeping up with change in pharmacy practice.

Outsourced adopters were typically interested in new patient care innovations but were not as ready to invest in the Health Watch Screening Program before they knew everything about it. The majority of the outsourced adopters saw providing the service in their pharmacies with residents from Auburn University through the outsourced mechanism as a way to test the waters. One owner stated:

After seeing it done here we are still discussing whether we want to do it ourselves or not. We have been discussing that if we do this and we don't make any money at it, is this something we are willing to do just for the good of pharmacy.

Non-adopters did not have the drive to provide new patient care services the way adopters and, to an extent, outsourced adopters did. Non-adopting organizations generally focused on dispensing medications and were more interested in increasing prescription volumes than implementing new patient care services to gain revenue. Typically, non-adopting pharmacies seemed stuck in their ways as demonstrated by comments like:

I think it's a great service I just don't think we're ready for it… we would need to change our mindset as a pharmacy.

As well as:

Outside of filling prescriptions… I mean, that's basically what we are. We're a retail pharmacy.

These organizations seemed content with dispensing medications as their only service and were uninterested in trying something new in their pharmacies. This characteristic was also illustrated in their perceptions of the Health Watch Program (e.g., taking too much time from their routine dispensing activities).

Organizational Connectedness

Based on Rogers (1995) concept of connectedness, this study defines organizational connectedness as the level of activity in professional organizations and associations, as well as, other relationships that have the ability to influence business decisions. Throughout the interviews, key informants were given many opportunities to discuss professional relationships

and sources they use to gain information about new possibilities in pharmacy. The majority of adopting organizations were active members in multiple professional organizations and could specifically recall when and from whom they first heard about the Health Watch Screening Program. For example, one key informant stated:

We heard about this service at the annual Alabama Pharmacist Association meeting. I think after that I heard about it a few more times… once in an ACPI (American Pharmacy Cooperative, Inc.) newsletter and I remember receiving the CE (continuing education) flyer from the university.

This ability to recall specific instances when information about the Health Watch Screening Program was provided is unique to the adopter group. Another example of this was a key informant who explained:

(We first heard about the Health Watch Screening Program) through the Alabama Pharmacy Association annual meeting…(two individuals involved in the design of the program) came to do a presentation on what they have started with SEIB and to bring pharmacists up to date on the parameters for biometric screening. At that point we were told that by October to expect the information and so about a year later we contacted them and got the information.

This example demonstrates not only the ability to recall exactly when and where they first heard about the program but also who provided the information and when they could expect additional information. It seems adopters were fully engaged in learning about these opportunities and therefore paid close attention when information was provided.

Another example of adopting organizations' connectedness is their professional relationships outside of membership in associations and specifically with designers of the

program. Through direct communication with the Health Watch Screening Program designers, adopting organizations ensured they had all the information available. One adopting organization key informant reported:

(A program designer) suggested that we do it and her presentation we totally agreed with as far as why we should do it. I feel like when you get approached by somebody that has substance like (the program designer) and that's what she's doing and talking to people that can change our practice and she asks you to buy into a program then it's really a no brainer for us.

The above comment illustrates that this adopting organization has a direct relationship with influential people outside of professional organizations who they trust and who influence their decisions.

Outsourced adopters also seem to be highly involved in professional organizations. The majority of the outsourced adopting organizations mentioned being involved in ACPI or APA but could not remember specifically when they first heard about the Health Watch Screening Program. For example, one key informant stated:

It was at the APA meeting (when we first heard about it)…I wanna say 2 - maybe 3 years ago…The fella who is the head of SEIB came and talked at the meeting… Unless maybe, you never know, (people closely involved with the design of the program) may have talked to me about it before then and I just don't remember.

This uncertainty about when they were first introduced to the program differs from the adopting organizations and may demonstrate their lack of interest in the program. Another key informant couldn't recall when or from whom they heard about the program stating:

I'm not really sure (where we first heard about the program). I'm not sure about that.

Outsourced adopters did however demonstrate their professional relationships with the designers of the Health Watch Program that influenced their decisions to provide the program in their pharmacies. One key informant stated:

(A person closely involved with the program) contacted me and told me about it and that it was SEIB offered to all their members to try to get better outcomes for their patients…

About half of the outsourced adopters mentioned a relationship outside of a professional organization with a designer of the program that influenced them to make the decision to allow the Health Watch Screening Program to be provided in their pharmacies.

Non-adopting organizations were the least likely to be able to recall how they first heard about the Health Watch Screening Program. In fact, all non-adopting pharmacies provided a different response regarding how they first heard about the program. One key informant stated:

I think (a person involved with the Harrison School of Pharmacy) was the one telling me that it was in the works and on the way… but it wasn't quite in existence at that point… but that's the first I heard about it.

While another stated:

I heard about the one being offered by the State of Alabama… what's it called…SEIB I believe… from a friend of mine that works for the state and he asked me if I was aware of some of the things the state was doing and I told him not all the things but he explained to me what all they were doing.

As demonstrated by these two vastly different responses, non-adopters were not receiving their information through the same channels as adopters and outsourced adopters. Other non-adopters reported that they first heard about the Health Watch Screening Program from a variety of different sources including a state employee who was a current patient and an independent pharmacy chain while one responded that "word gets around" and another couldn't recall. Overall, the non-adopters were much less connected with professional organizations and did not have the same professional relationships with influential individuals closely associated with the Health Watch Screening Program.

Another interesting observation was that the non-adopter pharmacies reported being involved in the Alabama Pharmacist Association (APA) and that the APA had an influence on what they do in their pharmacies yet none of the key informants mentioned the annual meeting at which the information about the Health Watch Screening Program was provided. This could possibly be due to a complete lack of interest in the program when the information was provided and therefore no recollection of the presentation.

New Program Sense-Making

Based on Rogers (1995) generalization regarding the ability of organizations to deal with abstractions and make sense of innovations, this study defines "sense-making" of a new program as the level of skepticism regarding new programs and the way new programs are interpreted by organizations. This aspect is important because all innovations come with some degree of uncertainty associated with them but how organizations deal with this uncertainty varies. Adopters seem to overlook the uncertainty associated with the Health Watch Screening Program

and therefore their decision to offer the program was generally an easy one to make. One key informant stated:

I guess when I talked to (a person closely associated with the program) and she told me about the program and told me about the reimbursement so at that point we were pretty much all in… I guess my decision making process didn't last that long…

Another key informant explained:

It wasn't a long drawn out decision. To me it's a no brainer…Where some pharmacists say, 'I don't want to do that because it doesn't have anything to do with pharmacy,' I look at it and say it has everything to do with pharmacy.

Adopting pharmacies see offering this kind of service as an opportunity to expand their role and are rarely worried about potential failure and the complexity of the implementation. Adopters seem very enthusiastic about the possibilities with the Health Watch Screening Program and feel it is a great opportunity which results in the level of skepticism associated with new programs being low.

Outsourced Adopters typically have a higher level of skepticism associated with new programs and innovations than do adopters. In order to manage that uncertainty, they choose to outsource the service and observe how successful or unsuccessful the service can be. One outsourced adopter explained:

We looked at it as a learning experience and what we learned was if you build it, they will come. We were shocked at the number of people who came in that day.

The outsourced adopters were skeptical that offering the Health Watch Screening Program would be received positively and therefore decided to offer the service in their pharmacy without the risk of financial loss. After observing the service being provided in their pharmacy, the level of skepticism associated with the program was lowered for some. In fact, key informant stated:

I have the dates for the next continuing education and we plan of sending at least one of our PharmD's down to attend the training. We plan on providing the screening with our own pharmacists hopefully sometimes soon in the future.

Non-adopters displayed a level of skepticism that was higher than both the adopters and outsourced adopters as could be expected. One of the main sources of this skepticism with a new screening program was that many non-adopters had tried patient care services in the past that had failed. One owner stated:

We've been through several attempts, you know, where they start up pretty good but then they disappear…

Another owner expressed his displeasure with past programs stating:

I'm not even sure I have the method to bill it and all that… I don't do part B anymore because I tried it and after I lost $100,000 I quit.

A key informant explained his frustration with past programs saying:

We've done these things a couple times over the years where it looked like it was set up to run pretty good but the biggest problem I have seen is getting the patients to participate…In the past they had a diabetes program and I did all the training and basically, I don't know if they sent us the patients who didn't want to participate or what but I offered to buy them dinner and

everything else but it was really hard to get them to participate. We tried a lot of things and it just wasn't real successful.

Although these non-adopter pharmacies were selected from the areas of the state with the largest state employee populations, some felt they would not have enough participants to break even. One key informant explained:

I'd have to do 60 of those things to break even and I don't think that just from the standpoint of the economics of it I don't think I could do it…I just think I'll spend a lot of money and never break even.

Another key informant expressed similar feelings when he stated:

I'd have to have the clientele to break even with it…You really need the market and I don't think I do.

An even more telling example of the high level of skepticism associated with new patient care innovations was an owner explaining experience with reimbursement for failed patient care services in the past. He explained:

You have to do a bunch of them and take the time… and then you have to submit the paperwork and see if you get paid for it…

This demonstrates the lack of trust with the methods of reimbursement. Non-adopters seemed skeptical that once they commit the energy and resources to a new patient care innovation that they will even be paid for the service they provide.

Past experiences with failed programs, a lack of information about the program, a distrust of the reimbursement methods and a misunderstanding of the potential patient population in their

areas have made non-adopters very skeptical of the Health Watch Screening Program. When a new program like the Health Watch Screening Program is announced it seems non-adopters have already made their decision not to offer it.

Implementation of the Health Watch Screening Program and Sustainability

Sustainability of beneficial innovations is influenced by the decisions made during the implementation process. The implementation of the Health Watch Screening Program in the adopting pharmacies and the different models of how this new service is offered are reported in the following section.

Although only one pharmacist must be credentialed and certified to provide the Health Watch Screening Program in a particular pharmacy, all of the adopting pharmacies chose to have at least two of their employed pharmacists attend the continuing education and training. Key informants stated the reason for this was to ensure there would always be someone available to provide the service when needed. One key informant stated:

We have four pharmacists that can provide the service but as volume picks up we may designate one (of the four) who it's their job that day.

Adopters also explained that having multiple pharmacists available to provide the service would allow them to provide the service more often. Key informants explained that by always having a pharmacist who is trained to provide the service available they could offer this service on a walk-in basis if they chose to.

The majority of the key informants expressed positive views toward the new Health Watch Screening Program and felt that their pharmacists were also enthusiastic about the

opportunity. Key informants generally assumed the positive feelings from their staff pharmacists without asking them specifically how they felt. For example:

…I assume they (staff pharmacists) are completely on board…I think they would all be glad we're doing it…I'm sure they see it as a good thing…

Another more direct example from one key informant stated:

I haven't really asked them (how they feel about offering the Health Watch Screening Program). And you know, they work for me so I really don't care. I'm the leader and I set the tone. You cannot let your career be ruled by what other people think. If you see the need and you are equipped to fill that need, then do it.

Key informants also explained that they were not going to give their staff pharmacists any incentive for providing this service. All of the adopters believed that their pharmacists understood the importance of providing the program and that any profits from the Health Watch Screening Program would go back into the pharmacy. One owner explained:

I haven't had a need for that (providing incentives for additional services). I think my pharmacists understand that their salaries are derived from a number of sources and as long as they are doing a good job and I am pleased with them then it's never really been an issue.

Another factor that has the possibility to impact sustainability of the innovation is the general feeling in the community toward the pharmacy offering of the Health Watch Screening Service. In general, the majority of the adopters had received only positive feedback from members of the community including other health care providers. One owner stated that the only

negative feedback she had received had been from another pharmacy in the area. The owner explained further:

It was an interesting thing but in the end, they weren't interested in the program anyway. It wasn't a good fit for them. I spoke with them and said, you know, do you really consider this to be a threat? Do you think we are gonna take customers away from you? And I explained that I'm not trying to take you patients away. We want the patient who never gets any health care. I want the patients that don't go to the physician's office.

Another owner explained they have received negative feedback from a physician who felt the pharmacy was trying to take business away from physicians because of a different service their pharmacy provided. This owner explained that the physicians in the area were doing the same kind of thing to pharmacies by opening large primary care offices that also own their own pharmacies. He stated:

If they (other health care providers in the area) call me and they are upset about me providing the Health Watch do you think I care? No. I don't. They have no problem getting into my business and I can sleep at night knowing that I haven't gotten into theirs even though they think I have, I really don't care.

All key informants said the feedback from the community had been positive and patients had thanked them for making the Health Watch Screening Program more accessible. One key informant attributed this positive response from community members to the fact that people "don't like being told by their insurance companies that they can only get tested once a year" and they are excited that they can now have some say in when and where they have this screening performed.

Regarding sustainability of the program, key informants expressed their future plans to expand this service to other employers or groups of patients in the area. One key informant stated:

I really want to get good at doing the Health Watch by doing it a couple of time and we get paid and the process works and then approach a self-insured employer that I have already had preliminary discussions with in the community.

Other key informants mentioned similar plans and many already had area employers in mind. One key informant described a plan to pair the Health Watch Screening Program with a vaccination program and go to large self-insured employers in the area and provide the service on site. Overall, expansion of this program was a common goal among adopters.

Adopters not only had plans to expand the program in the future but had taken steps to ensure the sustainability of the program in their pharmacies. One key informant explained:

We may actually hire an additional pharmacist part time…to keep carrying out the service at the same level. You know, we think we have done very good so far but we want to respond to whatever demand there is and I believe there is enough opportunity out there that we could have a sustainable service several times a month. We are already considering hiring additional clinical personnel to help us continue this service and carry out the same level of service because it's already been successful.

It is clear that steps have been taken and resources have been devoted to ensure the success of the program and its sustainability. The implementation of the Health Watch Screening Program seems to have been a process that these adopters have approached in a way that gives this program the best possibility of success.

CHAPTER 5

DISCUSSION

This chapter discusses the study findings in context with the review of the literature to review any differences between the existing literature and the research findings, identify the implications of the information that emerged from the research, and recommend areas and opportunities for future study.

General Findings

The first major theme that seemed to arise from the data repeatedly was the difference in organizational identity among adopters and non-adopters. Adopters take on more of a provider role in that they find providing patient care services a necessary part of their pharmacy profession. Non-adopters take on more of a dispenser role in that they believe dispensing medications should be the majority of what they do as pharmacists. This is demonstrated in the different ways these two groups attempt to generate additional revenue in a time of decreasing reimbursements for prescription medications. While adopters are actively seeking out new innovative patient care services, non-adopters seem to seek out new innovative dispensing practices or increase prescription volume. The overall perception of the role of a pharmacist differed greatly between the adopters and the non-adopters. Adopters and outsourced adopters were willing to provide patient care services in their pharmacies even if they did not generate profit because they felt it was their duty and responsibility. Non-adopters viewed their

responsibilities as filling as many prescriptions as possible and ensuring patients got their medications in a timely manner. This finding is important because as we seek to advance pharmacy practice to offer patient care services, how pharmacists and pharmacies view their own identity may have great impact on their practice.

Differences in organizational identity between adopters and non-adopters results in a different focus in their core business; adopters focused on patient care services while non-adopters focused on dispensing services. As such, adopting pharmacies recognized a need that was created out of dissatisfaction with the current status quo. Key informants said things like, "you're either growing or you're dying," which demonstrates the mentality of these organizations and their common need to challenge the status quo. Among these pharmacies, an active search for new services is ongoing. Another possibility is that the need for the innovation among adopters was created by a change agent and therefore the simple realization of the existence of this new service encouraged adoption (Rogers, 1995). Whichever method of need creation was used, there was a need among the adopting pharmacies and the adoption of the Health Watch Screening Program satisfied it. This differs greatly from the non-adopter group. Non-adopter organizations' identity is dispensing pharmacies. As such, they were heavily focused on dispensing duties and saw no need to challenge the status quo because they were content with their usual dispensing routines. The literature explains that the need for the innovation drives its adoption and therefore without the need, organizations tend to perceive the innovation as irrelevant and avoid messages related to it (Rogers, 1995). This could be one of the reasons that non-adopters remembered hearing about the Health Watch Screening Program but could not recall from whom. Although these organizations were aware of the program, awareness alone was not enough to create motivation to adopt. Non-adopter organizations did

not see the benefits of changing normal routines as enticing enough to take on new duties. Until non-adopters are dissatisfied with the current status quo or realize the benefits gained from offering the new innovation, they will continue focusing heavily on dispensing and resist adopting new patient care innovations.

The second theme that differentiated adopters and non-adopters was related to perceived attributes of the Health Watch Screening Program. Once organizations have knowledge of the benefits of a new innovation they tend to seek out additional information and begin to form an attitude toward the innovation (Rogers, 1995). To form an attitude about the innovation, the characteristics of the innovation as they are perceived by the potential adopting organization are explored. Because non-adopters did not perceive a need for the Health Watch Screening Program, they avoided messages related to the innovation and did not see the benefits that could be gained from offering the service. This potentially led non-adopter organizations to end their search for additional information about the innovation as their attitude had already been formed. Hence, when asked if they perceived the Health Watch Screening Program as more complex than other patient care services, they responded that they did not. In other words, non-adopters did not perceive the innovation as complex yet they chose not to do it. The responses from the non-adopters could have been due to their attitudes that were formed in the early knowledge acquiring stage and therefore the complexity of the innovation was not even considered when they made their decision not to offer the service.

The third theme that was found to be different between the adopter and non-adopter groups was the importance of professional networks and membership in professional associations. Professional networks that resulted in relationships with the change agents (designers of the program) had a strong association with adoption decisions. This finding

supports Rogers' (1995) generalization that early adopters tend to have more change agent contact than later adopters. Adopters trusted that the program would work because their colleagues (in this case, a change agent) said it would. In contrast, non-adopters did not seem to have the same professional networks and were skeptical the program could be successful. This is also aligned with Rogers' (1995) generalization that earlier adopters are better at coping with uncertainty and risk than later adopters. Non-adopters received their information about the program from a variety of sources that were not closely associated with the program and therefore the information they received was incomplete and in some cases inaccurate. There needs to be a method to contact these pharmacies and disseminate information about new opportunities in pharmacy. An opinion leader or change agent needs to be identified that can successfully get the information across and change the perceptions of non-adopters. It is also important to ensure that the correct message is being delivered to potential adopters. If the information about the innovation is unclear or does not highlight the factors that decision makers in pharmacy deem important it will be avoided or ignored. Clear information can help reduce the skepticism associated with the adoption of new innovations and help pharmacies to make sense of new programs.

This study is consistent with Rogers' (1995) Model of the Innovation-Decision Process and the variables determining the rate of adoption of innovations. As found in this study, early adopters are rational in their decision-making process and carefully consider a variety of factors when making their adoption decision. When considering the relative advantage of the innovation, adopters consistently mentioned benefits that can be classified into two groups: 1) benefits to the community and their patient population and 2) potential profit gained from providing the service. This finding is worth discussing as making business decisions in

pharmacies and health care organizations may differ from other businesses. Pharmacy is caught in the middle between being a business and providing a professional service. This creates an internal struggle for pharmacy decision-makers. On one hand they know they must invest in services that have the potential to increase revenues so that they are able to stay in business while on the other hand they have a professional responsibility to provide patient care for their patients and community in which they reside. As seen in this study, some key informants in the adopter group explained that adopting and providing this service was important to them whether or not they thought they would actually gain additional revenue because the service was needed in their community. In other words, as long as the service is self-sufficient, potential to gain additional profit is not the only factor driving adoption. Unlike many businesses outside health care, it is important to note that profit is not always the only consideration when making decisions to invest in new programs or services.

According to the sustainability literature, the modifiability of an innovation has been consistently shown to increase the likelihood of the innovations sustainability (Evashwick & Ory, 2003; Goodman & Steckler, 1989; Shediac-Rizkallah & Bone, 1998; Westrick, 2010b). Additionally, Westrick and Breland (2009) found that the more modifications made to an in-house innovation the more compatible the innovation was with the pharmacy which also led to increased sustainability. Although this study was conducted at the infancy of the Health Watch Screening Program, adopters found the modifiability of the innovation to be beneficial. For example, adopters can offer the program via an in-house or outsourced model, by appointment or walk-in, during certain times of the year or year round, etc. They proposed expansions of the service to other large organizations in their communities and to the accessibility of the service

which leads to sustainability of the program and is consistent with the literature (Westrick, 2010b).

The sustainability literature also addresses the differences in the level of commitment to an innovation between adopters and outsourced adopters (Westrick, 2010a). Adopters fully engulf themselves with the innovation and by doing so increase the likelihood that the program will be sustained over time. The organization invests monetary resources, time, space, and personnel to provide the service in-house with the employed workforce. Alternatively, by providing the service in an outsourced model the level of commitment to the innovation is relatively low. The pharmacy provides the space for the service to be offered but does not have to invest any additional resources. The low level of commitment of the outsourced adopters was shown in this study when key informants responded to questions about the future of the program. When asked, "Do you have any plans to provide this service in the future?" outsourced adopters typically explained that they had no definite plans or offerings of the screening scheduled but that they would probably be willing to allow the service to be offered again.

Implications for Program Designers

This study demonstrates the importance of the program designers and the methods they decide to use in the dissemination of new patient care services. In order for community pharmacy owners to adopt new patient care services, program designers must generate awareness by using a variety of methods to disseminate the information to all community pharmacies. A program designer providing a presentation at annual meetings of professional associations is a good start but will not reach those owners who are not association members or who are members but are not active. Program designers need to ask themselves, "Who is going to be the best

person to deliver the message about this new innovative service?" Often innovative opinion leaders need to be identified in the community because change agents (program designers) can be seen as outsiders that differ greatly from the potential adopters they are trying to reach (Rogers, 1995). The use of innovative opinion leaders such as highly respected and well known pharmacy owners in the area may help to spread the information about new programs to resistant pharmacy owners because these individuals are highly respected, trusted, and at the center of the profession (Rogers, 1995). Because of this high level of respect and trust, some of the apprehension or uncertainty non-adopters have due to failed programs in the past can be reduced or eliminated and increase their willingness to try something new. Early adopters, such as the current adopters of the Health Watch Screening Program, could later serve as opinion leaders to help disseminate the innovation as they are generally considered the group to go to for advice and information about the innovation (Rogers, 1995).

Another important point is that the information provided to potential adopters must be aligned with their current organizational identity. Program designers should attempt to convince potential adopters that the status quo is no longer good enough. They should ask themselves, "What does the message need to say to reach all groups of potential adopters and how do we need to say it?" Program designers should address the time concerns of pharmacies that identify themselves as distributors by talking with them about the service and explaining how the service would fit in their normal workflow. The message must be portrayed in a way that allows the high-volume, dispensing-focused pharmacies to see the potential benefit in providing patient care services. Examples and demonstrations may need to be provided to convince these pharmacies that the time required to provide the service will not be as great as they may perceive. The reimbursement concerns should be addressed as well by demonstrating how easy it would be to

bill and be reimbursed for the service. Also, potential for additional revenue needs to be explained in a way that makes it easy for pharmacy owners to make the decision that providing the service would be worth their time.

Areas and Opportunities for Future Research

This qualitative study found that decisions regarding the offering of patient care services in independently owned community pharmacies are affected by the source of the information they receive and the message that source delivers. A future study that evaluates the dissemination of a new service or program using different messages could produce further, more concrete evidence of this. An example of a potential study could be an experimental design in which 3 different groups of pharmacies receive 3 different messages via the same source. Group A would receive a message focused heavily on the potential to increase revenue, group B would receive a message heavily focused on the importance of serving the community, and group C would receive a message explaining what the continuing education program entails and its cost. Awareness and adoption rates could be compared between the three groups to determine if the message can be designed in a way that increases adoption.

Another area for future research is sustainability of the Health Watch Screening Program over time. This study was conducted during the initial adoption stage while the program was still in its infancy. All questions regarding sustainability were based on factors that have been shown to impact sustainability but because this program is so new, sustainability will actually occur in the future. A follow-up study with the pharmacies that implemented the program to see which factors significantly contribute to the success and sustainability or failure and abandonment of the program, as well as, any expansions or modifications of the program would

be beneficial. Also, a study of the factors that influence outsourced adopters to remain outsourced adopters, become in-house adopters, or abandon the service would make a significant contribution to the literature as this has been studied in immunizations (Westrick, 2010a) but not yet in other patient care services in pharmacy.

Third, future research should address the differences between different adopter categories. Rogers (1995) classifies adopters based on innovativeness and identifies characteristics of each adopter group. This study suggests that the early adopters are influenced directly by the change agent. Rogers (1995) explains that potential adopters look to early adopters for advice and early adopters are generally seen as opinion leaders. A study that compares adopter categories and identifies who or what impacts the early adopters, early majority, late majority, and laggards to adopt the Health Watch Screening Program would be a valuable contribution. For example, a study could survey all early majority and late majority adopters to identify opinion leaders. True opinion leaders would be identified using a process in which the top 10 percent of the individuals identified through the surveys would be allocated to different pharmacies throughout the state in an effort to accelerate the diffusion of new patient care services or other innovations in the future. This Opinion Leader Model (Valente & Davis, 1999) has been demonstrated with computer simulations to drastically increase rate of diffusion of innovations and should be tested in the diffusion of patient care services in pharmacy. Additionally, as the Health Watch Screening Program becomes widely adopted and large chain pharmacies begin offering the service, a study that identifies who and how the decision was made in chain pharmacies, as well as, examines differences in the adoption decision-making process, how the service is offered, and to what extent modifications are made to the program in

comparison to independently owned pharmacies would further add to the body of knowledge and is warranted.

Conclusion

This study contributes to the body of knowledge by examining the attributes of the Health Watch Screening Program and the characteristics of organizations to identify the importance of specific factors in the adoption and implementation processes. The findings suggest that organizational characteristics, attributes of the innovation, and the methods used to disseminate information about new programs have influence on the adoption and implementation decisions made in community pharmacies. Specifically, adopters perceived offering patient care services as beneficial, felt the innovation was a good fit with their organization, and had relationships with change agents who disseminated the information about the program. Non-adopters perceived the amount of time required to provide patient care services as great, felt they would not make enough profit providing the service to make it beneficial, and did not have direct contact with the change agent to clarify their questions and concerns. The results of the study may be valuable to program designers to identify possible issues pharmacies may perceive as barriers in their programs and give these pharmacies the tools and information to overcome these barriers. This study should also be valuable to pharmacies to help them understand how their perceptions may affect their ability to advance their pharmacy operations.

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APPENDIX A

RECRUITMENT LETTER

AUBURN
UNIVERSITY
HARRISON
SCHOOL OF PHARMACY

Dear Alabama Community Pharmacy Manager,

I am writing to ask for your assistance. You are invited to participate in an Auburn University approved research study of community pharmacies being conducted to gain a better understanding of factors that influence pharmacy decisions to implement or not implement pharmacy-based screening services. Your participation is essential to this research that has the potential to impact community pharmacies in your region and across the state of Alabama.

Your pharmacy has been selected for this study based on the region of Alabama in which is it located or its current status as a Health Watch screening service provider. To better understand the reason your pharmacy has implemented or has not implemented the Health Watch screening service, I would like to schedule an interview with you at your convenience. I can interview you at your pharmacy or over the phone, the choice is yours. The interview will take no longer than one hour. Because I know that you are very busy, you also have the option to pass this request on to a co-worker who played a key role in the decision to offer or not offer the Health Watch screening service.

The risks involved in the study are minimal. The study and all subsequent reports will only describe patterns and themes discovered through analysis of the interviews and may include specific quotes to demonstrate common responses but will be presented in a manner that protects your identity and your pharmacy's identity. To ensure confidentiality, after scheduling the interview with you, I will code all respondents. All codes will be stored in a locked file and kept separate from the interview recordings and transcribed responses to ensure your responses cannot be linked to you or your pharmacy in any way. Upon completion of the study, all contact information will be destroyed. As an incentive for participating in my study, I will compensate you $50 for your valuable time.

If you have any questions about this study, please contact me by phone at (334) 559-1705, email at teetebs@auburn.edu or my research advisor, Dr. Salisa Westrick, at (334) 844-8314. We will be more than happy to address any issue you may have regarding this study.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone at (334) 844-5966 or email at hsubjec@auburn.edu or IRBChair@auburn.edu.

Thank you in advance for your consideration. I look forward to scheduling an interview with you in the near future.

Sincerely,

Benjamin S. Teeter
Principal Investigator

APPENDIX B

INFORMED CONSENT LETTER

AUBURN
UNIVERSITY
HARRISON
SCHOOL OF PHARMACY

(NOTE: DO NOT SIGN THIS DOCUMENT UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)

INFORMED CONSENT
for a Research Study entitled "Adoption and Implementation of the Health Watch Screening Program in Community Pharmacies "

You are invited to participate in a research study to identify factors that influence community pharmacies to implement or not implement pharmacy-based screening services and the decision-making process community pharmacies utilize. Also, this study aims to explore different models of how screening services are offered and identify infrastructure that adopting organizations put in place to ensure long-term sustainability. The study is being conducted by Benjamin Teeter, Graduate Student, under the direction of Dr. Salisa Westrick, Associate Professor, in the Auburn University Department of Pharmacy Care Systems. You were selected as a possible participant because you are a pharmacy manager, pharmacy owner, and/or pharmacy key decision maker whom works in a community-based practice in the State of Alabama.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to schedule an interview with Benjamin Teeter. During the interview you will be asked general questions about the Health Watch Screening Service that address both the initial adoption and implementation stages of the service in your pharmacy. Your total time commitment will be no more than one hour.

Are there any risks or discomforts? The risk associated with participating is minimal. The risk associated with participating in this study is breach of confidentiality. To minimize this risk, we will create a code list in which each participant will receive a randomly assigned 3-digit code. This code will be used to identify each recorded interview. The recorded interviews will be stored on Benjamin Teeter's password protected computer that he does not share with any other individual. The code list with contact information will be stored in a locked file and kept separate from the recorded interviews. The study and subsequent reports will only describe themes and patterns recognized in the interviews and may use specific quotes to demonstrate these concepts but they will be reported in a way that ensures responses will not be identifiable to the respondents. Hence, all reports for this study will be presented in a manner that protects the identity of the participants as well as the pharmacies at which they are employed and anonymity is ensured. Upon completion of the study, the code list and all recorded interviews will be destroyed.

Are there any benefits to yourself or others? If you participate in this study, you and others can expect to gain a better understanding of the factors that act as facilitators and barriers to adoption and implementation of patient health screenings in community pharmacies. This information can be used to promote the adoption and implementation of health services in community pharmacies and, in doing so, enable the pharmacy profession to play an important role in the effort to improve overall public health. We/I cannot promise you that you will receive any or all of the benefits described.

Participant's Initials _____

Will you receive compensation for participating? To thank you for your valuable time you will be offered a $50 incentive for your participation.

Are there any costs? If you decide to participate, the only thing we ask from you is your time. You can expect no other costs for your participation.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. There will be no partial compensation should you chose to withdraw. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Harrison School of Pharmacy, or the Department of Pharmacy Care Systems.

Your privacy will be protected. Any information obtained in connection with this study will remain confidential. Information obtained through your participation will be used in partial fulfillment of the requirements for the degree of Master of Science in Pharmacy. The results of the study will also be published in peer-reviewed and professional publications and will be disseminated through presentations at local, regional, and national professional meetings. The study and all subsequent reports will only describe themes and patterns recognized in the interviews but all concepts will be reported in a way that ensures your responses will not be identifiable. Your identity as well as your pharmacy's identity will remain anonymous.

If you have questions about this study, *please ask them now* or contact Benjamin Teeter at (334) 559-1705 or Salisa Westrick at (334) 844-8314. A copy of this document will be given to you to keep.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO PARTICIPATE.

_____		_____	
Participant's signature	Date	Investigator obtaining consent	Date
_____		_____	
Printed Name		Printed Name	