

5-2013

# A Case Study on Pharmacy to Explore the Perceptions of Pharmacy Leaders and Policy Makers on the Benefits, Risks, and Alternatives of the Doctorate as the Entry Level Degree in Health Professions

Heidi Marie Crocker

Western Kentucky University, [heidi.crocker682@topper.wku.edu](mailto:heidi.crocker682@topper.wku.edu)

Follow this and additional works at: <http://digitalcommons.wku.edu/diss>



Part of the [Education Commons](#), [Medical Education Commons](#), [Pharmacy and Pharmaceutical Sciences Commons](#), and the [Public Health Commons](#)

---

## Recommended Citation

Crocker, Heidi Marie, "A Case Study on Pharmacy to Explore the Perceptions of Pharmacy Leaders and Policy Makers on the Benefits, Risks, and Alternatives of the Doctorate as the Entry Level Degree in Health Professions" (2013). *Dissertations*. Paper 43.  
<http://digitalcommons.wku.edu/diss/43>

This Dissertation is brought to you for free and open access by TopSCHOLAR®. It has been accepted for inclusion in Dissertations by an authorized administrator of TopSCHOLAR®. For more information, please contact [topscholar@wku.edu](mailto:topscholar@wku.edu).



A CASE STUDY ON PHARMACY TO EXPLORE THE PERCEPTIONS OF  
PHARMACY LEADERS AND POLICY MAKERS ON THE BENEFITS, RISKS, AND  
ALTERNATIVES OF THE DOCTORATE AS THE ENTRY-LEVEL DEGREE IN  
HEALTH PROFESSIONS

A Dissertation  
Presented to  
The Faculty of the Educational Leadership Doctoral Program  
Western Kentucky University  
Bowling Green, Kentucky

In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Education

By  
Heidi Marie Crocker

May 2013

A CASE STUDY ON PHARMACY TO EXPLORE THE PERCEPTIONS OF  
PHARMACY LEADERS AND POLICY MAKERS ON THE BENEFITS, RISKS, AND  
ALTERNATIVES OF THE DOCTORATE AS THE ENTRY LEVEL DEGREE IN  
HEALTH PROFESSIONS

Date Recommended April 1, 2013

Stephen K. Miller  
Stephen K. Miller, Director of Dissertation

Beverly Siegrist  
Beverly Siegrist

Grace Lartey  
Grace Lartey

Judy Davison  
Judy Davison

Carol A. Fox 4-26-13  
Dean, Graduate Studies and Research Date

I dedicate this dissertation to my husband, Steve Crocker, who encouraged me to endure.

Also, I dedicate this work to my son, Peter, and my daughters Samm and Natalie.

## ACKNOWLEDGEMENTS

Completing a dissertation in partial fulfillment of the requirements for a doctoral degree is in part the result of a great many people who have contributed to its production. I owe my gratitude to all those people who have made this dissertation possible and because of whom my goal of a doctorate in education has been completed.

My deepest gratitude is to my chairperson, Dr. Stephen K. Miller. I have been fortunate to have a chairperson who taught me the dispositions and attitudes that mark a researcher, gave me the freedom to explore on my own, and at the same time provided the guidance when my thoughts became jammed. Steve taught me how to question thoughts, express ideas, and obtain a deep respect for the work of intellectuals in the field of sociology, education, and research design. More importantly, Steve's unwavering commitment to excellence, accompanied by unconditional patience and support, were the foundation for the completion of this empirical and theoretical compilation.

I also would like to express my appreciation to each of my committee members. Dr. Beverly Siegrist gave infinite encouragement and practical advice. Her insightful comments at different stages of my research were thought provoking and helped me focus my ideas. Dr. Grace Lartey provided encouragement for use of correct grammar and consistent notation in my writings. Her skillful statistical knowledge ensured the rigor of this study. Dr. Judy Davison contributed an understanding of research theory as it relates to this study. I am grateful to her for holding me to a high research standard and enforcing strict validation for each research result, thus, teaching me how to do research.

## CONTENTS

### I. STATEMENT OF THE PROBLEM

Introduction.....	1
Pharmacy Education.....	2
The Problem Defined.....	9
Purpose of the Study.....	11
Research Questions.....	13
Significance of the Study.....	15
Limitations of the Study.....	17
Definitions of Terms.....	18
Summary.....	21

### II. REVIEW OF THE LITERATURE

Introduction.....	24
Health Professions.....	25
Accreditation.....	34
Professional Associations.....	51
Degree Classifications.....	57
Elevation of Clinical Doctorate as Entry-Level Degree.....	69
The Current Study.....	87
Summary.....	90

### III. METHODOLOGY

Introduction.....	93
Research Design.....	94

Role of the Researcher.....	97
Population and Sample.....	98
Research Questions.....	102
Instrument Development.....	102
Expert Review of Research Instrument.....	103
Procedures.....	105
Data Analysis.....	107
Trustworthiness and Validity.....	109
Ethical Considerations.....	111
Summary.....	112
 IV. RESULTS	
Introduction.....	116
Methodological Considerations.....	117
Results.....	121
Summary.....	202
 V. DISCUSSION AND CONCLUSIONS	
The Study in Brief.....	211
Discussion.....	215
Recommendations.....	288
Conclusions.....	294
 REFERENCES.....	301
 APPENDIX A: Interview Schedule Mapped to Research questions.....	321
 APPENDIX B: Document Analysis Protocol.....	326



APPENDIX C: Interview Schedule.....	328
APPENDIX D: Information to Expert Panel Members.....	332
APPENDIX E: Letter to Study Participants.....	336
APPENDIX F: Consent Form.....	339
APPENDIX G: Summary Outline.....	342

A CASE STUDY ON PHARMACY TO EXPLORE THE PERCEPTIONS OF  
PHARMACY LEADERS AND POLICY MAKERS ON THE BENEFITS, RISKS, AND  
ALTERNATIVES OF THE DOCTORATE AS THE ENTRY-LEVEL DEGREE IN  
HEALTH PROFESSIONS

Heidi M. Crocker

May, 2013

352 Pages

Directed by: Stephen Miller, Beverly Siegrist, Grace Lartey, and Judy Davidson

Educational Leadership Doctoral Program

Western Kentucky University

The clinical doctorate is an emergent trend in many health profession disciplines. Collier (2008) projects continued momentum toward higher degrees for entry into practice and advancing the field in health professions. There has been minimal research on how the trend of doctoral education in health professions will affect health professions education, delivery of services, and interdisciplinary relationship among health care providers, or the wider society (Freburger, King, & Slifkin, 2008).

This research focused on the transition to the clinical doctorate in one profession, Pharmacy, retrospectively examining the inception and enactment phase of the Pharm.D. The study provides important insight into the perceptions of the leaders and policy makers who were involved in the changes that led to the Doctor of Pharmacy as the entry-level degree for the practice of pharmacy. The qualitative methods of data collection, primarily 14 high-quality interviews, allowed the researcher to search for commonalities and patterns related to this policy mandate: development and implementation phases in both the educational institutions and the practice of pharmacy.

The findings from this research provide evidence that these leaders are confident that establishing the Pharm.D. as the sole entry into pharmacy practice was the right decision for the profession, but acknowledge that requiring the Pharm.D. was only the starting block, that more work remains to maximize the knowledge, skills, and abilities of

the Doctor of Pharmacy in the U.S. healthcare delivery system.

The discovery of 18 patterns and 71 attendant themes documented the implementation of the Pharm.D., with major changes at four levels: health professions education, delivery of services, interdisciplinary relationships, and society as a whole. Decisions at each level acted as building blocks for modifications at the next level, but in a non-linear fashion. Changes that resulted at each step necessitated constant reflection and on-going improvements, but the profession continues to move forward. Recommendations derived from this empirical investigation provide extensive guidance to leaders in other healthcare disciplines who are contemplating the clinical doctorate as the entry-level degree into practice. Many of the anticipated outcomes at the time of the mandate were inaccurate, and numerous findings were unanticipated.

# CHAPTER I

## STATEMENT OF THE PROBLEM

### **Introduction**

Over the past decade, clinical doctoral programs in health profession disciplines (i.e., physical therapy, nurse practitioner, and occupational therapy) have proliferated in the midst of both support and controversy among educators, professional organizations, practitioners, administrators, and third party payers. Many accrediting agencies for these disciplines are implementing a clinical doctorate as the entry-level degree into practice. This degree is focused on gaining depth and experience in clinical knowledge and skills, unlike the Doctor of Philosophy (Ph.D.) that focuses on research (Freburger, King, & Slifkin, 2008).

Extensive literature is available within each specific health profession that explains the rationale and requirements needed for programs leading to that degree, such as the Doctor of Physical Therapy and the Doctor of Nurse Practitioner, a dearth of published work addresses how this trend will affect health professions education, delivery of services, and the interdisciplinary relationship of health care providers. To address this gap, this research is a qualitative study of how the transition to the clinical doctorate in one profession, Pharmacy, was perceived during the establishment and implementation phase of the Doctor of Pharmacy. Pharmacy is useful for this study because the transition to the Doctor of Pharmacy (Pharm.D.) as the profession's entry-level degree began over 20 years ago and was implemented in 2003; thus, so it is probable that the effects of the

change have become manifest. Leaders in health profession disciplines who are contemplating the clinical doctorate as the entry-level degree into practice must examine the potential benefits of the degree, the risks associated with transitioning to the new degree, and the alternatives available to changing the educational requirements necessary to enter the profession (Freburger et al., 2008). The dialogue occurring in many health professions may be enhanced by the query of other professions that have moved toward doctorates to discover any commonalities in pursuing a higher entry-level degree. Specifically, what can other health professions learn from a study of this process for pharmacy, the area with the longest history for this journey?

### **Pharmacy Education**

In 1989 the American Council on Pharmacy Education (ACPE) mandated that the Doctor of Pharmacy (Pharm.D.) would be the entry-level degree for a licensed pharmacist effective with students graduating after January 1, 2003. This decision provided the opportunity to expand and increase the pharmacist role in the rapidly changing health care system (American College of Clinical Pharmacy, 2000). The American Association of Colleges of Pharmacy (AACP) Commission to Implement Change in Pharmaceutical Education was established in July 1989 to develop a series of recommendations to guide pharmaceutical education as it evolved to meet the changing demands of the profession, the health care system, and society (Commission to Implement Change in Pharmaceutical Education, 1997a). The Commission issued a series of background papers and position statements that outline the fundamental missions of pharmacy practice and education (Commission to Implement Change in Pharmaceutical Education, 1997a); the educational requirements including curricular content and outcomes (Commission to Implement Change in Pharmaceutical Education, 1997b); the

endorsement of the Doctor of Pharmacy as the sole degree for entry into practice (Commission to Implement Change in Pharmaceutical Education, 1997c); the responsibility of pharmacy educators for scholarship, fellowships, and graduate and post-graduate education and training (Commission to Implement Change in Pharmaceutical Education, 1997d); and commitment to the preparation of graduates proficient in pharmaceutical care in a rapidly changing healthcare system (Commission to Implement Change in Pharmaceutical Education, 1997e). These historical documents provide insight into influences on the policies, standards, and regulations that govern pharmacy education and the profession.

The accreditation requirement for the Pharm.D. was another step in the furtherance of pharmacy education that began with the four-year Bachelor's degree mandate in 1932 (Cohen, 2008). Throughout the 20th century, the AACP and other national associations collaborated on numerous study projects surrounding the scope of practice and internal policy issues within pharmacy that led to the conclusion that clinical practice constitutes the essence of pharmacy (Elenbaas & Worthen, 2009). Professional leaders saw potential in clinical practice as the basis of professional philosophy and directed their attention toward educating members of the healthcare industry and society about the expansion of knowledge, skills, and abilities of the pharmacy professional. In addition, standardization of pharmacy education to incorporate clinical and patient interaction experiences with the mechanics of pharmaceuticals would become necessary.

The debate regarding the implementation of the Doctor of Pharmacy as the entry-level degree occupied pharmacy organizations and leaders for so long that some sectors of the profession neglected other issues that were critical and equally as important to the advancement of the profession (American College of Clinical Pharmacy [ACCP], 2000).

According to Elenbaas and Worthen (2009), a six-year professional course of study was first proposed in 1948, and the University of Southern California instituted the entry-level six-year Pharm.D. as its sole professional degree two years later. Throughout the 1960s, 1970s, and 1980s the field moved toward the adoption of patient-centered practice as a unifying philosophy of practice. Concomitantly, the role of the pharmacist was visualized as, and the professional mission evolved to, pharmaceutical care, moving the professional focus from product-oriented to patient-oriented. In the early 1990s professional leaders and pharmacy educators endorsed pharmaceutical care as its new professional mission (American College of Clinical Pharmacy [ACCP], 2000). The 1992 mandate by the American Association of Colleges of Pharmacy (AACP) that the Pharm.D. would be the sole entry-level into practice was approved without much debate. The Accreditation Council for Pharmacy Education (ACPE) demonstrated support of the mandate with implementation deadlines for institutions to establish programs and the revised Pharm.D. standards that went into effect in 2000 (Cohen, 2008). Cartwright and Reed (2005) believed that academic programs could not be mandated into greatness; moving forward with the Pharm.D. merely as an exercise in compliance rather than a commitment to the goals and vision of the Pharm.D. could result in less than desirable outcomes.

Retrospectively, the adoption of the pharmaceutical care mission and the mandate of the Doctor of Pharmacy as the entry-level degree were commendable steps for the profession, but these changes alone are not sufficient to transform professional practice (ACCP, 2000). Since these landmark decisions were adopted, various task forces have been formed to analyze important aspects of implementation such as competencies that must be built into every Pharm.D. program, development of efficient bridge programs for practitioners, and ongoing dialog of key stakeholders (Cartwright & Reed, 2005). The

AACP Janus Commission was established in 1995 to examine the health care environment. The commission was charged with identifying, analyzing, and predicting changes within the environment that were likely to influence pharmacy practice and pharmaceutical education. The Commission reported to the AACP, through several background papers and position statements, both opportunities and threats that were perceived as present in the environment at that time (Janus Commission, 1997). The American College of Clinical Pharmacy was convinced that the changes in United States health care delivery, economic growth, education, and health management systems that occurred during the 1990s had “set the stage for meaningful transformation of the profession” (Janus Commission, p. 995).

### **The Clinical Doctorate**

A common goal of the clinical doctorate across disciplines is to produce a more autonomous practitioner (Freburger et al., 2008). The professional and academic accrediting associations play a central role in the decision regarding entry-level requirements into practice by setting standards that are referenced by states when accrediting programs and licensing practitioners (Bollag, 2007). Since the 2003 implementation deadline, a few articles have been written in pharmacy literature exploring whether doctoral education fits the profession’s purpose and identity, especially at a time of limited resources and economic uncertainty (cf. Freburger et al., 2008; Siler & Smith Randolph, 2006).

Advocates of the clinical doctorate propose that the elevated degree will improve quality and professionalism of care. Some support the position that transformation of a profession is rooted in the dramatic demographic changes in society, scientific progress, and technological advances in the health care industry (Collier, 2008). Others decry the



validity of the clinical doctorate and suggest the professions are elevating the degree in order to help practitioners provide service autonomously from physician referral and allow for potential increased reimbursement rates for services (Siler & Smith Randolph, 2006). Some opponents argue that the additional time requirements and financial cost of education are unnecessary and will result in a shortage in the labor force (Freburger et al., 2008).

### **Theoretical Perspective**

The theoretical framework for this qualitative study is grounded in changes in health behavior, which can be defined as “the actions of individuals, groups and organizations, as well as the determinants, correlates, and consequences, of these actions- which include social change, policy development and implementation, improved coping skills, and enhanced quality of life” (Parkerson et al., 1993, p. 30) related to health. The most common health behavior theories found in this field are the Transtheoretical Model/Stages of Change, the Social Cognitive Theory, and the Health Belief Model (Painter, Borba, Hynes, Mays, & Glanz, 2008). Applying elements of these theories in the exploration of potential determinants of behavior may increase understanding of the individual, interpersonal, group, organizational, and community levels.

The current focus is the professional leaders’ and policy makers’ perceptions of the benefits, risks, and alternatives of the Doctor of Pharmacy as the entry-level degree during the decision-making process. The Transtheoretical Model (TTM) divides the process of change through a progression of stages from pre-contemplation, in which there is no intention to change behavior, through motivation and intention to change behavior stages, ending in a maintenance stage that incorporates the uptake of the new behavior (Kraft, Sutton, & McCreath, 1999). Di Noia and Prochaska (2010) suggested that the

decisional balance construct of TTM provides a framework for understanding the decision-making process as individuals progress through these stages.

Social Cognitive Theory (SCT) provides a framework for understanding how environment and social influences impact the beliefs and cognitive competencies, and in turn affect a person's behavior (IDEA, 2006). The central concept of SCT is that self-efficacy, belief in the ability to execute a behavior, is directly linked to outcome expectancies. Outcome expectancies, expecting that engaging in certain behaviors will produce desired outcomes, motivate behavior change and are critical in the development of intentions to take on a certain behavior (Williams-Piehota, Sirois, Bann, Isenberg, & Walsh, 2011). According to Williams-Piehota et al., "once intentions are formed, efficacy expectations provide the chief motivation to initiate and maintain behavior change (p. 23).

The Health Belief Model provides an understanding that a person's predicted behavior is a process of cognitive decision-making and is dependent on the person's perceptions of the seriousness, susceptibility, benefits, and risks of the situation (Fingeld, Wongvatuny, Conn, Grando, & Russell, 2003). The probability that someone will take action to change a behavior is influenced by the perceived threat of a situation and the expectations about outcomes (Redding, Rossi, Rossi, Velicer, & Prochaska, 2000). Exploring the perceptions of stakeholders during the decision-making process may predict the course of action needed for successful implementation and maintenance of the behavior change.

For this study, the Social Cognitive Theory and The Health Belief Model are too limited, focusing on individuals. In contrast, the Transtheoretical Model (TTM) is applicable for both individuals and to the collective response of the individuals in the

institutions affected by the change. Therefore, TTM is selected to frame this work.

The literature on the Transtheoretical Model indicates the existence of fundamental barriers or concerns that underlie a complex organizational change process. An example could be the degree required to enter into a profession (Brazeau et al., 2009a; Greenwood, Suddaby, & Hinings, 2002; Siler & Randolph, 2006). These essential issues directed the study's research agenda and served as the framework for the investigative study. One problem is that changing the professional philosophy does not guarantee that all stakeholders, such as the health care system, third party payers and the patient base, will embrace the necessary changes to transform the practice of pharmacy to match the philosophy.

A second problem is that the education system must be remodeled and advanced to a professional doctoral level that will prepare graduates to be competent in pharmaceutical care and function as professionals in a changing health care system and economic climate (Brazeau et al., 2009a). In a climate of rising health care cost and a chronic shortage of qualified health profession educators, this presents a daunting task for educational institutions and program administrators.

A third problem surrounds the increased emphasis toward inter-professional collaboration in health professions education and practice. For successful transformation of pharmacy practice, other health disciplines such as medicine and nursing must accept that the clinical doctorate degree provides insurance that graduates are prepared for educational and professional roles in other health science education programs and interdisciplinary practices (Brazeau et al., 2009b).

### **Empirical Perspective**

The AACP Commission to implement change in pharmaceutical education states

in Position Paper 3 that there is a societal need for pharmaceutical care to be the practice model of pharmacy in the 21st century (Commission to Implement Change in Pharmaceutical Education, 1997c). Position Paper 3 provides evidence of substantial support from pharmacy educators and professionals for the change to the “doctor of pharmacy (Pharm.D.) as the sole degree for entry into pharmacy practice” (p. 7). The commission identified issues and barriers that this substantial change would likely generate for schools and colleges of pharmacy as well as the practice of pharmacy overall during the implementation phase of the change.

The Commission did not, however, address how this philosophical change would be translated into the rapidly and continuously evolving health care system (Janus, 1997). Eckel and Kezar (as cited in Cartwright & Reed, 2005), suggested that the ingredients for successful change are strong administrative support, a collaborative process, a motivating vision, persuasive and effective communication, long-term orientation, rewards and incentives, and necessary supporting structures. The transformation of pharmacy practice from a product-oriented to a patient-oriented profession is an encompassing process, requiring collaboration from all segments of the profession and an inclusive approach for adoption (ACCP, 2000). The pharmacy profession has adopted the philosophy that pharmaceutical care will be the practice model in the 21st century and the transition to the Doctor of Pharmacy as the entry-level degree is now complete.

### **The Problem Defined**

Many of the accrediting agencies are mandating the new advanced degree requirements, and most are establishing standards and student outcomes to guide the institutions in the transition. However, resources to support design and implementation of the curricular changes necessary to comply with the new standards are not the domain of

the accrediting agencies, and state funding levels for higher education have been falling due to widespread economic hardships. In addition, the changes require a strong rationale and sufficient resources to gain acceptance and prevent opposition as well as the potential argument of degree creep from members of the health care system and society (Clement, 2005).

Rapport, Stelzner, and Rodriguez (2007) provided information on the external forces that are behind the progression of the clinical doctorate as an entry-level degree that pertains to all disciplines undergoing the same transformation. Entry-level education refers to the degree or educational level at which a person is deemed prepared to enter a given profession. One external force required is a shift in the culture of health care and method of service delivery to a system that emphasizes an understanding of patient belief systems, integrated study and intervention, and advocacy for patients as required for best practices (Threlkeld, Jensen, & Royeen, 1999). Threlkeld et al. (2009) addressed the dissemination of this information by discussing the observed trend in other healthcare fields that has resulted in the transition to clinical doctorate education programs, as well as the clinical doctorate degree as a means of entering the profession.

The influence of the external force of the doctoring profession is a key concept in the discussion of clinical doctorates. Several studies are cited in medical literature pertaining to the characteristics of the doctoring profession, one that comes with the award of a clinical doctorate degree (Benoit, Mohr, & Shabb, 2004). This sparks a new arena for investigation on the general topic of the clinical doctorate. Benoit et al. (2004) provide enlightening information on academic program transition, curriculum design, and implications for one area of concern specific to this discipline, i.e., school-based physical therapy.

Understanding the experiences of the physical therapy profession during the transition to a doctoring profession provided valuable knowledge and guidance for leaders of other health care disciplines that are involved in this organizational change within the profession. These types of major change agents have an influence on every aspect of a profession including the educational programs, best practices, and governing bodies. However, one should be mindful that each situation is unique and each discipline will respond to these changes differently. It is important to learn from the experiences shared and refer to these case studies for perspective, but it is equally important not to rely on the experience of one single institution for a template on how to proceed through the change.

The complexity of today's healthcare environment demands that new practitioners have knowledge, skills, and abilities that need to be addressed at multiple levels. How the clinical doctorate practitioner blends into the delivery system is unknown because these changes are in their infancies. The transformation in healthcare education to the clinical doctorate is happening at an accelerated rate, and multiple disciplines are trying to adjust to the changes. Although the disciplines may have different orientations, the similarity of process suggests that studies exploring these different institutional changes would be beneficial to the larger field of healthcare professions, with the sharing of results and resources providing useful information to all of the specific fields.

### **Purpose of the Study**

The issues laid out in the previous section have yet to be addressed adequately with respect to empirical evidence. Almost all of the writing in this field has been relevant commentary and opinion, position papers, and results of commission investigations such as the five position papers written by the AACP Commission to

Implement Change (1997a, 1997b, 1997c, 1997d, 1997e) and the White Paper: A Vision of Pharmacy's Future Roles, Responsibilities, and Manpower Needs in the United States (American College of Clinical Pharmacy, 2000). The limited empirical studies give inadequate information on how the transition to the clinical doctorate was implemented, specifically the challenges and barriers that were faced to secure a successful transition. In addition, limited empirical studies are available that provide details on the outcome of the transition on the profession, especially the educational programs, best practices, and governing bodies. This study directly addresses this general lack of understanding, particularly from the perspective of stakeholders who were pivotal in the decision to change the requirement for entry-level education for pharmacy.

Thus, the purpose of this qualitative study is to understand the perceptions of professional leaders and policy makers regarding the benefits, risks, and alternatives of the clinical doctorate as an entry-level degree for pharmacists. Semi-structured interviews with the leaders and stakeholders who were pivotal in making decisions regarding the academic accreditation mandate to implement the new Pharm.D. constitute the database. This allowed the researcher to retrospectively evaluate the process of transitioning from the master's level to the clinical doctorate level, the risks accompanying the switch to the new requirements, and alternatives to the transition that could result in satisfying the philosophy and mission of the profession.

The subjects interviewed in this study were all participants in key policy groups that were involved in the decision to mandate the Pharm.D. as the entry-level degree for the profession of pharmacy. The four stakeholder groups included: (a) Commission to Implement Change in Pharmaceutical Education, (b) the Janus Commission, (c) the AACP Board of Directors, and (d) the ACPE Board of Directors. Therefore, the central

research question for this study can be stated as: “What are the current perceptions (benefits, risks, and alternatives) of key policy makers in the pharmacy profession who participated in the decision to require (by January 1, 2003) the clinical doctorate (Pharm.D.) as the entry-level degree for practitioners?”

### **Research Questions**

The decision to implement the Pharm.D. as the entry-level degree into pharmacy practice was influenced by numerous stakeholders who represented various groups. These groups made independent decisions that, collectively, resulted in the final decision. The following research questions are framed within the context of the wider milieu depicted in Figure 1.

1. What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:
  - a. health professions education?
  - b. delivery of services?
  - c. interdisciplinary relationship of practicing clinicians?
  - d. societal and economic landscape of the health care industry? (Cost-benefit)
2. What is the transferability of an entry-level clinical doctorate as related to professional opportunities?

Specifically, these empirical questions represent the perceptions of the key members of the four organizations most instrumental in the decision to move toward the Pharm.D. as the entry-level degree to practice pharmacy.



<b>Stakeholders</b>	↔	<b>Categories of Influence</b>	↔	<b>Educational Factors</b>	↔	<b>Health Professions Outcomes</b>
Accrediting Agencies		Institutions of higher education		Entry-level degree		Accreditation conferred
Institutions		Economic costs/benefits		Time to degree		Clinical doctorate
Academic Leaders		Academic policies		Program quality		Pharm.D.
Professionals		Professional societies/employment		Credentials		Professional status/influence
Students		Universities		Clinical training requirements		Certification
Consumers		Healthcare/society		Patient education		Local pharmacist

*Figure 1.* Institutional and organizational factors relating to preparation for pharmaceutical professional practice.

### **Significance of the Study**

As conversation about and movement toward the clinical doctorate in the health professions has gained momentum, leaders in the various fields need to understand key policy and operational issues as well as complications that are likely to arise during the transition to these new degrees. There is little to guide these decision makers with respect to an empirical track record.

The one exception to this lack of experience is the field of pharmacy, which made the decision to move toward the Pharm.D., with full implementation by January 1, 2003. Because that process is now sufficiently institutionalized, studies of the transition could provide useful guidance to stakeholders in the other health profession fields.

To the author's knowledge to date, the current study constitutes the only research on the benefits and risks of the degree and alternatives associated with increasing the educational requirements necessary to enter the profession. The literature indicates that there are fundamental barriers or concerns that underlie a complex organizational change process such as the degree required to enter into a profession (Brazeau et al., 2009; Greenwood et al., 2002; Siler & Randolph, 2006). These essential issues directed the study's research agenda and served as the framework for the investigative study. Beyond the groundbreaking retrospective nature of this work, the following represent specific contributions to the field.

First, the nature of the study focused primarily on the emic voice (the view of the individual inside the decision-making role). This study tapped members of the four key policy bodies involved in the decision to require the clinical doctorate as entry-level for practice in pharmacy. Because the researcher was a chiropractor with educational responsibilities, this outsider's view facilitated taking the etic perspective as well

(Danquah & Miller, 2007; Gall, Borg, & Gall, 1996). Further, chiropractic is sometimes thought of as “outside” the traditional healthcare disciplines and as less qualified than regular doctors. This outsider position, however, allowed the researcher to take a less biased perspective than those whose training comes from within one of the traditional healthcare disciplines.

Second, the qualitative approach to the study enabled the researcher to gain in-depth accounts about the long-term effects of this landmark transition in the education of healthcare professionals in pharmacy. Most of the pharmacy research cited has been commentary and opinion, position papers, and commission/investigative reports. Understanding personal perceptions and reflections from key individuals could provide unique insight to assist current policy makers in the transition to the clinical doctorate for additional health professions.

Third, this study is explicitly retrospective. Seldom do studies go back in time to reflect on the effects of policies after they have been implemented for a number of years. This approach can provide detailed information on how the transition to the clinical doctorate was implemented and how the outcome has affected the profession, especially educational programs, best practices, and governing bodies.

Fourth, previous research studies have not provided in adequate empirical evidence on the specific challenges and barriers faced during the transition to the Pharm.D. or the outcomes of the transition. In this study, the interview process provided the opportunity for the subjects to expound on the particular challenges or barriers that influenced the decision. For example, there were many conflicting opinions were voiced in publication about how the Pharm.D. would affect the delivery of service (American College of Clinical Pharmacy, 2000). Now, 20 years after the mandate, the changes in the

delivery of pharmaceutical services and the trade-offs that have come with the transition to the Pharm.D. can be identified.

Finally, two important topics were addressed in this study that could only be explored only after the mandate had been implemented for a number of years. First, has the new professional philosophy of “pharmaceutical care” evolved into the best practice model for the practicing pharmacist of the 21st century? Has the Pharm.D. allowed for expanded professional opportunities for the pharmacist? Second, how has the general population and society as a whole responded to the advanced knowledge, skills, and abilities of pharmacists? The retrospective nature of this study allows those questions to be directly addressed.

### **Limitations of the Study**

This study seeks information about the perceptions and insights of key individuals involved in the development and implementation of the Doctor of Pharmacy using qualitative data collected from semi-structured interviews. These data represent rich descriptions of the internal and external issues contemplated as described by the key individuals. However, several limitations to the research follow.

First, the fact that the researcher has a clinical doctorate in another health profession discipline, chiropractic, is a bias. The researcher needs to control voice, tone, and reactions to responses to questions as pharmacy leaders and policy makers are interviewed. Caution must be exercised to assure that personal feelings or insights specific to chiropractic are not embedded in the questions, nor in the interpretations of the data.

Second, it is anticipated that the interviewees will have some views that are similar, particularly if they served on the same committee during the discovery phase.

Some may feel obligated to support the decision that was ultimately approved and not fully disclose personal perceptions of the internal and external conflicts that were involved.

Third, this study is limited to the pharmacy profession. The external and internal policy issues for consideration when creating a clinical doctorate in pharmacy are not likely to transfer across disciplines with absolute fidelity.

Fourth, the population and actual samples are limited to the members of the AACP Commission to Implement Change in Pharmacy Education, the Janus Commission, the AACP Board of Directors, and the ACPE Board of Directors who served from 1989-2002. The population was chosen via purposeful, critical case sampling. This does not allow for a complete picture of the pharmacy profession. Cost and time considerations prevent extending the study to include stakeholders from other segments of the profession.

Fifth, the qualitative design of this study presents a limitation, in that qualitative research, due to the small sample size, has decreased generalization of findings to other health professions disciplines contemplating transitioning to the clinical doctorate. In addition, since the author provides interpretation of the results, the findings are subject to interpretation by other researchers.

### **Definitions of Terms**

The terms in this section are directly related to the research that is cited throughout this study. All are commonly used in the healthcare professions.

*Accreditation Council for Pharmacy Education (ACPE).* The ACPE is the accreditation agency of professional degree programs in pharmacy and providers of continuing education for pharmacists (ACPE, 2012, para. 1).

*Accreditation governing bodies.* United States higher education is governed by the private, non-governmental accreditation industry, a self-regulation mechanism for higher education to verify quality standards in education through a peer-evaluation process. The peer-evaluation process is accomplished by national, regional, and specialized private, non-profit organizations called “accreditation agencies” that develop their own quality standards and processes to evaluate institutions and programs. The majority of these organizations have full- and part-time employees to carry out the day-to-day operations but rely heavily on volunteers with a stake in accreditation to execute the accreditation process. The governing body and decision-making commission of an accreditation agency is comprised of appointed or elected members that representing higher education faculty and administrators, practitioners in specific fields, and members of the public (Council on Higher Education Association, 2010b, p. 1).

*American Association of Colleges of Pharmacy (AACP).* The AACP is a non-profit organization that represents and advocates pharmacy education in the profession of pharmacy (ACPE, 2012, para. 1).

*American College of Clinical Pharmacy (ACCP).* The ACCP is a professional organization comprised of members from multiple health professions that are committed to advancing clinical pharmacy and pharmacotherapy as the practice model for pharmacy (ACCP, 2012, para. 1).

*Clinical or practice doctorate.* This doctorate is a professional degree that focuses on clinical competencies required to practice and the utilization and translation of research into practice (Fraher, 2007, slide 3).

*Degree creep.* This term refers to mandating higher degrees or credentials than are necessary for entry into a field or profession. This phenomenon occurs when factors

external to scope of practice are perceived to represent additional education and new skill requirements as necessary without supportive data (Loochtan, 2011, slide 8).

*Delivery of services.* Delivery of service refers to the quantity and quality of resources defined within a scope of practice provided to those who need it, when needed, and with minimal waste. This is accomplished systematically by groups of trained individuals who enable people to receive health care (World Health Organization, 2012, para. 2).

*Doctor of Pharmacy (Pharm.D.).* A Pharm.D. is the first-professional degree required for the entry into pharmacy practice. Completion of the Doctor of Pharmacy curriculum from an accredited institution is required to sit for the North American Pharmacist Licensure Examination (NAPLEX) (Oregon State University, 2012, para.1).

*Entry-level degree.* This degree is granted with the knowledge, skills, and abilities required for entry into clinical practice and/or become licensed to practice (Fraher, 2007, slide 4).

*Health professions.* Health professions are occupations are competency-based in knowledge and skill sets to deliver specific services in the health care system (Copnell, 2010, p. 64). These occupations are defined as professions because of a specific body of knowledge and skills, extensive education and certification, established scope of practice, and ethical principles (Hampton & Hampton, 2004, p. 1050).

*Maturation of discipline.* As the scope of a field advances, proper preparedness for entry-level into the field requires additional education and acquisition of new skill sets (Loochtan, 2011, slide 15).

*Pharmaceutical care.* This term refers to the patient-oriented, outcomes-based pharmacy practice that requires interdisciplinary collaboration to promote health, prevent

disease, and design a safe and effective drug therapy regime for improved quality of life. The primary elements include the profession is medication-related, the care is provided directly to the patient, defined outcomes that will improve the patient's quality of life are expected, and the provider accepts responsibility for the outcomes (American Society of Health Pharmacists, 1996, p. 258).

*Research doctorate.* A Doctor of Philosophy (Ph.D.) degree is a post-graduate terminal degree that emphasizes knowledge and skills in conducting research (World Education Services, 2010, para. 10).

### **Summary**

A number of health professions are strategically in transition toward implementation of advanced degrees, a trend that has precipitated debate among educators, professional organizations, practitioners, administrators, and third party payers. Recent growth in clinical doctorates in the health professions, such as pharmacy, physical therapy, and occupational therapy, is motivated by professional associations advocating raising entry-level programs to the doctoral level, specifically those that prepare graduates for practice in the respective profession (Bollag, 2007). The decision to change the entry-level requirements into a profession has wide-ranging consequences and should spark discussion and incorporate perspectives of all stakeholders such as employers, educators, professionals, the public, regulatory agencies, and policy makers (Fraher, 2007).

Health profession disciplines that are contemplating the clinical doctorate as the entry-level degree into practice must examine the potential benefits of the degree and the risks and alternatives associated with increasing the educational requirements necessary to enter the profession (Freburger et al., 2008). It is important to note that clinical



doctorates are professional degrees focused on clinical competencies required to practice, not research degrees such as the Ph.D. that focus on conducting original research and scholarship. It may be beneficial to query other professions that have moved toward doctorates to discover any commonalities in pursuing a higher entry-level degree.

In the attempt to modernize the pharmacy practice from a product-oriented to a patient-oriented profession, considerable changes are necessary regarding professional development, scope of practice, regulation, pay modernization, and the development of a competency-based workforce (Copnell, 2010). The pharmacy profession adopted the philosophy that pharmaceutical care is the practice model for the 21st century, and the Doctor of Pharmacy is warranted as the entry-level degree into practice, effective in 2003. For this philosophy to become practice, the stakeholders have and must continue to embrace the transformative changes if the practice of pharmacy is to match the ideals inherent in the Pharm.D.

This study is a qualitative study of how the transition to the clinical doctorate in one profession, pharmacy, was perceived during the establishment and implementation phases of the Doctor of Pharmacy. Pharmacy was chosen because the transition to the Doctor of Pharmacy (Pharm.D.) as the profession's entry-level degree began over 20 years ago and was implemented in 2003, so it is probable that the effects of the change have manifested. Given the rapidly changing environment in the United States healthcare system, a retrospective study of the decision to move to the Pharm.D. from the perspective of key stakeholders could be very instructive for related healthcare professions currently pursuing or considering the move to the required clinical doctorate for entry to practice. Thus, the central research question for this study is: "What are the current perceptions (benefits, risks, and alternatives) of key policy makers in the

pharmacy profession who participated in the decision to require (by January 1, 2003) the clinical doctorate (Pharm.D.) for practitioners?”

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Introduction**

The purpose of this study is to discover the perceptions of pharmacy leaders have about the clinical doctorate and its effect on health professions education, the delivery of services, the interdisciplinary relationship of health care providers, and the relationship between the degree and increased professional opportunities. Pharmacy is useful as a case study because the transition to the Pharm.D. as the entry-level degree into practice was implemented in 2003, so the effects of this change on the profession are identifiable. The adoption of pharmaceutical care as the professional mission and the academic mandate of the Pharm.D. as the entry-level degree were monumental, but these changes alone are insufficient to transform professional practice to match the philosophy.

This study is a qualitative study of professional leaders' and policy makers' perceptions of the benefits, risks, and alternatives of the doctor of pharmacy as the entry-level degree, both during the decision-making process and regarding the transferability of the Pharm.D. degree for professional opportunities. Semi-structured interviews were designed to examine these issues at the individual, interpersonal, group, organizational, and community levels. The population consists of four stakeholder groups: the AACP Commission to Implement Change in Pharmacy Education, the Janus Commission, the AACP Board of Directors and the AACP House of Delegates from 1989-2002.

This review centers on research and policy related to clinical doctorates in the

health professions. Included is information on the structure and dynamics of professional agencies and educational institutions, aspects of degree classifications, and theories and studies on the elevation of clinical doctorate as an entry-level degree. The literature is derived primarily from the physical therapy, occupational therapy, nurse practitioner, and pharmacy disciplines that address issues and concerns that have risen in the transition to the clinical doctorate. The remainder of this chapter provides details of this literature. Included are sections devoted to **Health Professions, Accreditation, Professional Associations, Degree Classifications**, and the **Elevation of Clinical Doctorate as Entry-Level Degree**. The chapter concludes with a **Summary**.

### **Health Professions**

Health professions represent a cluster of careers involved, directly or indirectly, with practitioners regarded as experts in the respective field being key to patient wellbeing. The educational process among the disciplines is diverse, as are the licensing requirements to enter practice, the state regulated scope of practice, and the role within the complex healthcare delivery system.

### **Disciplines**

A health profession refers to an area in which trained practitioners exercise skill and judgment or provide service for the prevention or improvement of the health of an individual or the treatment and care of a person who is injured, sick, or disabled (Health Professions Act, 1996). According to the American Medical Association (AMA), there are more than 80 careers in health care and 8,400 accredited educational programs in those health care fields (American Medical Association [AMA], 2012). Their respective associations govern each health profession, and the educational programs are accredited by the respective health professions education accrediting agencies.

## **Prerequisites**

Each health profession has identified competencies for which one must be properly educated and trained to execute in order to perform specific job responsibilities within the occupation (Head, 2004). In addition to being formally educated and technically trained, a health professional must demonstrate proficiency of the identified competencies through a nationally validated examination process. The scope of practice of a health profession is determined at the state level. Each state government has a division that establishes the rules and regulation of practice within that state. Head acknowledged that many employers may require their own minimal standards of education and training above and beyond the state defined scope of practice.

**Academic.** There is no consistency within health professions regarding the required academic degree to enter into practice. Some disciplines such as medicine, chiropractic, and dentistry have demanded the first professional doctorate for entry into practice since their inception (Clement, 2005). Some professions such as physical therapy and pharmacy elevated the entry-level requirements over time, starting with the bachelor's, master's, and currently the doctorate. Still other disciplines such as nursing, require a lesser degree for entry into practice but offer advanced educational opportunities for entry into advanced practice. The Association of Schools of Allied Health Professions (ASAHP) (2012) published a position paper to identify some of the distinctions between the entry-level clinical doctorate (i.e., Doctor of Physical Therapy and Doctor of Pharmacy) and advanced practice doctorates such as those in nursing and occupational therapy. The rationale for the ASAHP position statement was a lack of clear distinctions between the types of doctorates, the absence of any defining guidelines regarding required credits for practice, and the expressed concerns of many allied health

educational leaders about the increasing number and types of doctoral-level programs that are emerging across disciplines. Phelps and Gerbasi (2009) concluded, “the doctoral degree is likely to become the most common entry-level degree” (p. 21).

The level of entry to practice and the content requirements of health professions education programs are guided by educational accreditation agencies. Phelps and Gerbasi (2009) investigated the accreditation requirements for practice doctorates in 14 healthcare professions and found considerable differences in terms of their standards and the type of information they provided. Most of the accrediting agencies examined had reframed their standards from specific curricular requirements to competency or outcome-based, but no consistent standards were found between professions. LaBelle (2004) indicated that credential inflation is a factor in the increase in professional doctorate programs resulting in master’s degree requirements for professional practice being replaced by the doctorate degree, especially in healthcare. This is supported by Royeen and Lavin’s (2006) prediction that “within less than a generation, the majority of health care practitioners in allied health and advanced practice nursing will be degreed at the level of the clinical doctorate” (p. 105).

**Licensure.** Most health professions try to ensure the quality of new professionals by requiring graduates of accredited programs to pass a licensing exam (Siler & Randolph, 2006). As mentioned earlier, a health professional must be formally educated, technically trained, and demonstrate proficiency through a nationally recognized examination process (Head, 2004). Each health profession has an educational credential, or entry-level degree, that plays an important role in the process to be licensed to practice within the discipline. These internal benchmarks provide a foundation for the external influences on education and credentials (Head, 2004).

In the United States, each state has jurisdiction over the standards and requirements for a practitioner to be licensed in their particular state. Licensing of health professionals, regulation of practice standards, and disciplinary actions are administered by a division of the state government. For example, the state of Virginia has the Department of Health Professions (Health Practitioners Monitoring Program, 1986) established within the executive branch. The governor appoints the Director of the Department of Health Professions and establishes a board of health professions that is represented by all disciplines. In addition, each discipline has a representative board, such as the Board of Pharmacy and the Board of Physical Therapy. Together, this department is responsible for a plethora of powers and duties listed in the Code of Virginia 54.1-2505, ranging from the establishment of requirements for individual disciplines to the regulation and enforcement of laws that pertain to each profession.

The state regulatory agencies work closely with the education accrediting agencies when developing a profession's scope of practice within the state. According to Hawkins, Roemheld-Hamm, Ciccone, Mee, and Tallia (2009), significant differences are found from state to state in health regulatory systems, depending on their perspectives and perceived roles. The current model for many state medical regulatory agencies is a "punitive, non-differentiated approach" to health professional performance problems. Each state medical licensing and board-certifying agency uses their own taxonomies to organize complaints against health professionals. Hawkins et al. found that communication problems with patients are the most important issue leading to complaints to state medical boards, and the most frequent and concerning complaint was providers not "conforming to minimal standards of medical practice" (p. 230). The authors addressed concerns about inadequate study methods for measuring communication skills

of health professionals and limited educational/remedial resources to address competency standards complaints. Hawkins et al. concluded that a national approach to health professionals study would promote a consistent framework for defining provider competence and performance in support of continued improvement of the health professions workforce. Head (2004) explained that the National Commission on Allied Health, developed by the U.S. Department of Health and Human Services, routinely conducts reviews of issues, problems, and potential solutions that pertain to education and the supply and distribution of allied health professionals, providing recommendations and alterations to scopes of practice and licensure standards.

The move toward national regulatory standards has been gaining momentum in the healthcare industry. Wakefield (1999) addressed the influence of technology on the health care delivery system. She noted that practice across state lines is happening in situations such as nurse triage in an emergency from two states away, a rural-based physician consulting with a physician at a major research institution, or a hospital establishing a web-site to provide health-related information across the globe. These examples are restricted by the diversity in the scope of practice acknowledged by each individual state. The Pew Commission (O'Neal and the Pew Health Professions Commission, 1998) emphasized that the goal of health professional regulation, "to establish standards that protect consumers from incompetent practitioners" (p. 84), will be best accomplished in the future if states enact uniform scopes of practice for each health profession. The Commission (1998) offered the recommendation that Congress pass legislation to facilitate professional practice across state borders.

### **Institutions**

The passage of the Affordable Care Act (ACA) in March 2010 was the beginning



of the United States' effort to transform the health care system, and higher education institutions have an important role in the process (Kirch, 2011). Not only do institutions of higher education provide health insurance for employees and students and frequently become involved in the delivery of health care, they face the complex challenge of educating the next generation of health professionals. Kirch proposed that, as the nation experiences a greater demand for health care services, colleges and universities must be prepared to train more health professions than ever before. Not only must higher education institutions produce the necessary number of health professionals, they must ensure that the entry-level workforce is prepared to meet the demands of the health care system of the 21st century.

**Structure.** Major changes are taking place within the U.S. health care system, with strong implications for health professions education. Engel (2000) suggested that the magnitude of anticipated changes still ahead challenge institutions to prepare their students to become adaptable and develop the skills necessary to be active participants in managing the inevitable change in the health care industry and in society at large. He pointed out that educational institutions are charged with providing the quantity of professionals to meet the healthcare needs of our society, but the economic imperatives of the institutions must be balanced with the cost incurred to educate the professional and the available career prospects. "Even now there are countries with an increasing number of doctors who are either underemployed or unemployed, while the cost of educating doctors continues to escalate" (Engel, p. 39).

Planning for the future resources is complicated by the dramatic changes happening within the individual health professions. Engel (2000) noted that most health professionals are educated at the university level, and an increasing number are at the

graduate and doctoral level. Educational institutions must stay abreast of the reshaping roles and responsibilities of members of many health professions and the revisions in the entry-level requirements and scope of practice that result. Clark (1999) stated that educators must anticipate current and emerging trends affecting the knowledge and skill requirements of health professionals, and they have the responsibility to design and implement educational programs that prepare the students for future practice settings. Two major trends transforming health professions education are the advent of community-academic partnerships and the evolution of interdisciplinary health care teams (Clark). These developments require new educational methods involving service-based learning and interdisciplinary collaboration. This is completely opposite from the traditional methods in which disciplines were kept isolated and the focus was autonomous research. Clark suggested that these tendencies have important implications for the competencies of the graduates of health professions schools and are one reason the professional doctorate is emerging as the entry-level degree for many health professional disciplines.

**Dynamics.** Huisman and Naidoo (2006) noted that, as many elements of the institutional infrastructure have adapted to the changing environment of higher education, the traditional doctorate (Ph.D.) has remained untouched. The authors explained this resistance to change because the doctorate is one of the few remnants of the “classical university” (p. 4); and the concept of proposing alternative doctorates, such as the professional doctorate, may be considered too radical of change. Nair and Webster (2010) concluded that change is often difficult in fundamentally conservative professions such as health care and education.

In the past 30 years, schools of health professionals have been increasing the ,

number of doctoral faculty due to internal and external pressure. Clement (2005) linked the trend for an increase in doctoral prepared faculty to the regional and specialty accreditation requirements specifying the terminal degree in the preparation of faculty and requesting increased scholarly research. Many of these professions are considering transitioning to the clinical doctorate and it is expected that faculty be at or above the level they are teaching. One measure of faculty development and quality improvement is increasing numbers of doctoral prepared faculty (Clement, 2005).

Raising the level of entry for practice from a master's to a doctorate requires analysis of the potential impact on educational programs and institutions. Clement (2005) argued that a strong rationale is needed to neutralize opposition regarding degree creep and an approved design and process for programmatic and curricular changes. Degree creep refers to the gradual increase in academic requirements necessary to enter a profession without justified increased knowledge and skill content demonstrated in the program (Loochtan, 2001). Clement emphasized that the transition will be associated with many hurdles during implementation. Changing from a graduate to a professional degree involves procedural transitions that have impact on students, faculty, clinical affiliations, other health care programs, and institutional policy and resources.

In 2005, the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools set up a task force to study the trends and growth in professional doctorates and the responses from academic institutions to these degrees (Higher Learning Commission, 2006). In the 2006 final report to the HLC Board of Trustees, the Commission stated that in health care professions “there is an obvious need to create capacity to educate practitioners and those who will primarily be educating practitioners” (p. 8) and that the professional doctorate should be considered as a degree

level within the hierarchy of U.S. degrees to fulfill this need. The Commission also noted the importance of national consistency in defining and evaluating professional doctorates and that this can only be accomplished only by the collaboration of the institutional accreditation bodies, the educational institutions, and the respective profession.

**Role and responsibilities.** As health professions restructure the requirements for entry into practice and the scope of practice, one role of the institution is to develop distinctions between the different levels of education and their relationship to levels of professional practice (Davis & Burnard, 1992). The development of the professional doctorate addresses the importance of research that is work-based focused and will develop “tradable knowledge,” which is a complement, not a replacement, to the theoretical focused research associated with the Ph.D. (Fenge, 2009). As a result, doctoral education is attracting new groups of learners, individuals who are looking for ways to achieve new insights and practice development but not wishing to pursue careers in academia or research (Bourner, Bowden, & Laing, 2001). Fenge suggested that it is essential for more practitioners to engage in professional doctoral programs to improve the research aptitude and capabilities of practitioners. Tennant (2004) stated that the challenge for universities is not to distinguish between the Ph.D. and the professional doctorate, but the transformation required to meet the needs of career professionals outside the traditional academic structure.

Barnett (as cited in Davis & Burnard, 1992) noted that one responsibility of education is to develop the professional. This suggests that education may be involved in the development of critical thinking and reflective skills that were once thought to be cultivated only through experience in professional practice. The translation of knowledge into professional action by encouraging students to develop skills, utilize knowledge, and

reflect on circumstances in critical ways is central to professional education (Davis & Burnard, 1992). The process of developing knowledge and skills does not evolve in linear fashion, but in a cyclic framework that is “reflected in Dewey’s model of learning from experience” (Davis & Burnard, 1992, p. 1399). Because the cycle of learning is a continual process, it becomes the responsibility of the educators to develop students as life-long learners who constantly revisit areas of knowledge and practice through a series of “study loops” (p. 1399).

Liao, Wang, and Chai (2007) reported that the current and future trends in health professions education include evidence-based practice, problem-based learning, informative technology, and advanced degrees for entry-level practitioners. It is the responsibility of the institution to develop academic programs that comply with the requirements and guidelines set forth by the accreditation agencies and, at the same time, provide the core curricula that satisfy the objectives of clinical practices that are established by the professional workforce (Liao et al., 2007). The nature of clinical education requires almost constant curriculum revision and expansion of essential content to maintain the currency of best practices within the health professions (O’Sullivan, Carter, Marion, Phol, & Werner, 2005). The institutional role to produce entry-level practitioners who are academically prepared and technically trained to enter into a profession is complicated and complex and requires strategic planning and educational reform.

### **Accreditation**

Academic accreditation is a complex system that has transformed from a simple concept of establishing educational quality assurance into a loosely coupled web of collaborative processes that attempt to assure and improve the quality of educational

institutions and programs. Grounded in the values and beliefs common to higher education, accreditation in the United States has evolved in response to the rapidly changing environment in higher education. In order to understand the current landscape of academic accreditation, insight into the historical perspective is imperative. This section provides the foundation for exploration of the current conditions, developing trends, and the future climate of accreditation in the United States and its position in the global arena of education.

### **History of Academic Accreditation**

For more than 100 years, accreditation is the only organized means for establishing and assuring quality education to the larger public. Starting with the establishment of the New England Association of Schools and Colleges in 1895, accrediting agencies began forming as membership organizations whose mission was to provide the foundation for self-regulation as a means of identifying institutions of higher education that offered honorable educational quality (Brittingham, 2009). During the industrial revolution, the number of higher education institutions rose rapidly, and the diversity of the types of institutions expanded. The accreditation agencies served society as the primary authorities on determining which schools were legitimate quality higher education institutions.

The Flexner Report was published in 1910 and provided a scathing report on the quality and educational standards of medical schools in the United States. The report sparked the initiative to develop educational standards for medical programs and systematic review processes for these programs. Other professions, educators, as well as the public noticed this overhaul of United States' medical education. The professions and educators responded by developing voluntary self-regulation processes of quality

assurance and quality improvement (Council on Higher Education Association, 2010b). The public responded by supporting the private organizations that developed the external quality review systems, resulting in the accelerated growth of the mission-oriented approach to accreditation in existence today (Brittingham, 2009). A succession of associations have been formed to coordinate the complex accreditation process. The CHEA, established in 1996, is the current private organization that coordinates institutional and programmatic accreditation in the United States (Eaton, 2009).

After World War II, the Servicemen's Readjustment Act of 1944, known informally as the G.I. Bill, support for returning veterans added another layer to the evolving accreditation landscape. A number of new institutions were established, and the quality of a few was questionable. The government required a strategy to guarantee that the federal student financial assistance and other federal funding followed students to legitimate institutions of higher education. Instead of developing a new system of its own, the government depended on the private, self-regulating accrediting agencies as the primary reliable authority on the legitimacy of higher education institutions and programs. This has been in effect since the Reauthorization of the Servicemen's Readjustment Act in 1952. States followed the lead of the federal government, making the accreditation system the gatekeeper for both federal and state funding (Schray, 2006a).

The relationship between the accreditation industry and the federal government is a notable example of a successful public-private partnership (Schray, 2006a). The private accrediting organizations provide external peer review of institutions and programs for quality assurance. The federal government ensures that taxpayers and recipients of student aid funds are attending quality institutions and participating in legitimate

programs. By working together, the accreditation-federal government relationship has established a reliable and effective process to provide access to one of the highest quality higher education systems in the world (Council on Higher Education Association, 2002). In countries where educational accreditation is primarily controlled by the government, accountability standards are robust, but institutional autonomy and accessibility is limited. In the United States, the historic self-regulated accreditation system has allowed for institutional autonomy and greater accessibility, but accountability to societal stakeholders is weak (Hunt, 2009).

Between 1950 and 1965, the accreditation industry established structure and standards for the important service it provided for students, society, higher education institutions, and the public interest. The foundation of accreditation is rooted in three primary values and beliefs about higher education: the importance of institutional mission, the principle of institutional autonomy, and the essential role of academic freedom (Eaton, 2009). During this time, the structure included three types of accrediting organizations: regional, national, and specialized. The regional accrediting organizations are divided into six regions of the country and review entire institutions, the majority being degree granting and nonprofit. National accrediting organizations oversee primarily non-degree granting and for-profit institutions. Most of these institutions are focused on a specific mission such as business or faith-based (Eaton, 2009). Specialized accrediting organizations operate nationally and review programs that produce professionals requiring licensure. The specialized accrediting agencies work closely with state regulators on materials of licensure of individuals and professional standards.

Concurrently, a standardized accreditation process was established that included five key components: a mission-based approach, standards, a self-study prepared by the



institution, a peer-review site visit with report and a periodic review process, and a decision that is made by a commission (Brittingham, 2009). The accreditation standards were developed and the fundamentals of today's accreditation process were implemented. First, institutions and programs conduct a self-study and prepare a written summary of their performance based on the standards of a particular accrediting agency. This document undergoes a peer review to test the reliability of the report and serves as the foundation for the on-site visit that occurs next. A visiting team, comprised of a commission of volunteer peers and public members, reviews the physical setting of the institutions and programs. Members of this decision-making commission will take action to affirm accreditation for new institutions and programs, reaffirm accreditation for established institutions and programs, or reject accreditation to institutions and programs (Council on Higher Education Association, 2002). The final component is that the institutions and programs must continue an on-going external review process. The review cycle may vary depending on the specific standards set by the accreditation agency and recommendations of the appointed commission.

The accreditation process is performed by 81 recognized private, non-profit organizations (Council on Higher Education Association, 2006a). Both the CHEA and the federal government, by virtue of the U.S. Department of Education, formally recognize these accreditation organizations (Schray, 2006a). The criteria for recognition and the outcomes of recognition used by the non-governmental coordinating agency CHEA, and the criteria for recognition and the outcomes of recognition used by the federal government, are different.

As mentioned above, the private, non-governmental accreditation industry was established as a self-regulation mechanism for higher education to verify quality

standards in education through a peer-evaluation process. The peer-evaluation process is accomplished by national, regional, and specialized private, non-profit organizations called “accreditation agencies.” The agencies develop their own quality standards and processes to evaluate institutions and programs. The majority of these organizations have full- and part-time employees to carry out the day-to-day operations but rely heavily on volunteers who have a stake in accreditation to execute the accreditation process. The governing body and decision-making commission of an accreditation agency is comprised of appointed or elected members representing higher education faculty and administrators, practitioners in specific fields, and members of the public (Council on Higher Education Association, 2010b). Primary funding comes from annual dues from institutions that are accredited and fees that institutions pay for the accreditation appraisal.

For more than 50 years, this self-regulating accreditation industry has been coordinated by a non-governmental coordinating agency. In 1974 the Council on Postsecondary Accreditation (COPA) was formed as a result of a merger between the Federation of Regional Accreditation Commissions of Higher Education (FRACHE) and the National Commission on Accrediting (NCA). FRACHE represented the regional accreditors, and the National Commission on Accrediting, founded in 1947, represented the national and specialized accreditation agencies (Department of Education, as cited by National Association of State Administrators and Supervisors of Private Schools [NASASPS], 2011). COPA members voted to dissolve in 1993 due to tensions among the membership, the result of the problems that faced higher education throughout the 1980s and 1990s (Council on Higher Education Association, 2010c). A temporary entity, the Commission on Recognition of Post-secondary Accreditation (CORPA), was established

to continue the recognition of accrediting agencies until a new national organization for accreditation could be established (NASASPS, 2011). According to the Council on Higher Education Association (2010b) website, CHEA utilizes a recognition process that confirms accreditation agencies evaluate an education institution on five standards:

- advances academic quality;
- demonstrates accountability;
- encourages purposeful change and needed improvement;
- employs appropriate and fair procedures in decision-making; and
- continually reassesses accreditation practices. (p. 2)

The outcome for an accrediting agency to receive recognition by CHEA is the assurance that the accreditation process that they employ promotes quality, integrity, and consistency.

The federal government utilizes the non-governmental accreditation to identify institutions eligible to receive federal student financial assistance and other federal funds (Schray, 2006b). According to the U.S. Department of Education (2011b) website:

The U.S. Secretary of Education (Secretary) is required by statute to publish a list of nationally recognized accrediting agencies that the Secretary determines to be reliable authorities as to the quality of education or training provided by the institutions of higher education and the higher education programs they accredit. (Part 602.1, para. 1)

The Accrediting Agency Evaluation Unit, under the auspice of the Office of Postsecondary Education and the National Advisory Committee on Institution Quality and Integrity (NACIQI), was established within the Department of Education to execute the federal responsibilities in accreditation (Council on Higher Education Association,

2006b). The criteria for recognition by the U.S. Department of Education are defined in Title 34 of the Code of Federal Regulations, with the most recent update effective July 1, 2010 (Department of Education, 2011a). The accrediting agency that applies for federal recognition must demonstrate that the accreditation process employed effectively addresses the institution or program in the following areas:

- success in student learning outcomes related to the institution's mission;
- curricula;
- faculty;
- facilities, equipment, supplies;
- sufficient fiscal and administrative resources;
- sustainable student support services;
- transparent recruiting and admission practices, academic calendars, catalogs, grading, and advertising tools;
- details of objectives and measures of programs offered;
- disclosure of student grievances available to agency; and
- record of compliance of institutional responsibilities under Title IV of the Higher Education Act, based on the most recent updates. (Schray, 2006a, Federal Government Recognition section, para. 4)

When the application for recognition is submitted to the U.S. Department of Education by the accreditation agency, the NACIQI will make a recommendation to the Secretary of Education regarding recognition. The secretary, in view of the Committee's recommendation, makes the final designation concerning recognition (U.S. Department of Education, 2011a). Funding for the CHEA recognition process is acquired through fees charged to the institutional members. The federal government recognition process is

funded through congressional budget allocations to the Department of Education (Eaton, 2009).

The Higher Education Act (HEA) was signed into legislation in 1965 with the goal of strengthening American colleges and universities. The Higher Education Act of 1965 was a response to concerns for more higher education opportunities for lower and middle class families, the lack of proficient instructors in emerging areas of study, the need for improved library resources at institutions, and the important role universities play in dealing with community development issues such as poverty and economic growth (Council for Opportunity in Education, 2003). This piece of legislation governs federal financial aid programs, institutional aid programs, and regulations that apply to colleges and universities as a prerequisite for awarding federal funds. The HEA section, Title IV: Student Assistance, addresses elements that pertain to federal student aid, including institution and program accreditation requirements. The HEA was reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, 1998, and 2004. Each reauthorization included changes to regulations related to the relationship between accreditation and the disbursement of federal funds. The amendments focused primarily on increases in institutional and program accountability measures. Accreditation is the targeted path in which study procedures and accountability reports can be collected. According to Brittingham (2008), “The newly re-authorized HEA, or Higher Education Act, has approximately 100 *new* reporting and record-keeping requirements for colleges and universities” (p. 36, emphasis in original). The strengthening control of the accreditation process through governmental policing has raised concerns that the non-governmental, voluntary process of institutional accreditation, historically unadulterated, may be in jeopardy. The convoluted relationship between the private accreditation industry and the

federal government has implications on many levels that are too vast for discussion in this chapter. Key references in this area include Brittingham (2008) and Graca (2009).

In the past two decades, a fervent interest has occurred in questions being asked about higher education. Critical questions related to accessibility, affordability, accountability, and quality have implications for the accreditation process and expectations because of its vital role in the American higher education community (Schray, 2006b). Accreditation is the primary method of quality assurance in higher education, serves as a gatekeeper to federal and state funding, and promotes accountability to the larger public. As tensions mounted in the higher education climate, accreditation became the target for any public discord and the buffer for the friction between institutions maintaining autonomy and increasing government regulations (Wergin, 2005). The accreditation system has been criticized for being “cumbersome, expensive, secretive, and outdated” (McMurtrie, 1999, p. 41) in a time when education is experiencing a rigorous transformation.

The assumption is that accreditation guarantees quality. Many researchers are suggesting that, during the accreditation era, the quality of higher education had been slipping. The 2003 National Study of Adult Literacy reported that millions of American adults possessed below minimum standard reading abilities (Neal, 2008). This is one example of the mounting problems faced by the education industry. Suggestions began to surface that evaluation by the government, institutions, and the public sector of the accountability structure of the U.S. educational system may be warranted. An audit of the current accreditation system, such as the Flexner Commission conducted on U.S. medical education, may result in solutions to some of the accountability loopholes for a more contemporary update to the system.

In 2005, as a response to the escalating interrogation, Secretary of Education Margaret Spellings formed the Commission on the Future of Higher Education. The Commission was established to initiate a national dialogue on the future of higher education and charged with “examination of how we can get the most out of our national investment to ensure that our higher education system continues to meet our nation’s needs for an educated and competitive workforce in the 21st century” (Schray, 2006, para. 1). The Commission placed the status of accreditation high on the agenda and launched an exhaustive audit of the current system and initiated conversation with the accreditation community and higher education stakeholders on improvement strategies for the accreditation process and expectations.

Published in 2006, the Spellings Commission report, *A Test of Leadership: Charting the future of U.S. Higher Education* (Commission on the Future of Higher Education, as cited in Bardo, 2009), was successful in the mission to initiate a national dialogue on the future of higher education and identified key concerns that warrant improvement throughout the higher education landscape. The report was highly critical of the current accreditation system and projected little confidence or conviction in accreditation as a force for quality in the future (Eaton, 2009). According to Bardo, the report calls for action and provides recommendations on five themes regarding the future of accreditation:

- the balance between government regulation and peer study;
- study of student learning;
- credit transfer between institutions;
- transparency of accreditation; and
- due process in accreditation. (p. 48)

The Spellings Commission report “has been taken as a major wake-up call for both higher education and the regional accrediting bodies” (Bardo, p. 48). He suggested that this report, along with two emerging trends - the concern with higher education costs, productivity, and outcomes from all stakeholders and the paradigm shift to outcomes based studies - are the provocation for significant transformation in accreditation.

Higher education and accreditation leaders heeded consideration for the Commission’s criticisms and recommendations. The Council on Higher Education Association (2010b) acknowledged that the Commission identified important concerns to be addressed for the accreditation process and its role as a force for quality. The accreditation industry and higher education, with the support and guidance of CHEA, have made progress in addressing the concerns stemming from the Spellings commission and are creating a culture of evidence, study, and accountability (Bardo, 2009).

Judith Easton, President of CHEA, expressed caution regarding the Commission’s call to nationalize quality standards. She proposed that movement toward federalization of a single set of standards and benchmarks for quality assurance would override the importance of self-regulation and escalate the public distrust in the autonomy of higher education (Council on Higher Education Association, 2010b). According to the American Council on Education (ACE), accreditation was one of the most controversial topics in the 2008 HEA reauthorization (American Council on Education, 2008). Congress asserted itself more directly into the accreditation process through amendments made related to the accreditation recognition process, the establishment of quality standards, and federal student aid provisions (Bardo, 2009). Because of the connection to Title IV financial aid and accreditation, institutions will be required to revise their organizational structure and must allocate additional resources on study, reporting, and accountability



measures.

In 2008 the institutions and accreditation agencies began their own investigation into the current accountability structure. The Council for Higher Education Accreditation launched the *CHEA Initiative*, a multi-year national conversation on the future of accreditation (CHEA, 2012). Many charges were related to this initiative, but the primary one was to gather information to prepare for the anticipated reauthorization of the Higher Education Act in 2012 (CHEA, 2010a, para.1). Through extensive dialogue with a plethora of stakeholders, eight issues about the future of accreditation were identified:

- advocacy for accreditation;
- accreditation's relationship with the federal government;
- accreditation and accountability;
- accreditation's relationship with state governments;
- the relationship between institutions and accrediting organizations;
- the relationships among accreditors;
- international activity; and
- the growth of the for-profit sector. (CHEA, 2010a, para. 5)

Initially, the participants acknowledged that changes were warranted in accreditation policy and practices but were interested in incremental changes over time. As the CHEA moves forward with this initiative, the action plan development phase will begin with many more national conversations.

Concurrently, the Higher Education Opportunity Act of 2008 (HEOA) was passed, resulting in increasing governmental pressure with regard to accountability from accreditation (CHEA, 2010c). The intensifying legislative activity created a sense of urgency for action by the participants in the *Initiative's* conversation. The focus shifted to

concerns about the relationship between the federal government's expectations and the role of the accrediting organizations in compliance. The framework for action plans for the most relevant issues in accreditation and higher education are being developed in preparation for the next reauthorization of the Higher Education Act in 2013.

The accreditation industry has been functioning with the same mission and processes for over 50 years. A profession or industry that is proactive in self-regulation and self-study establishes a more superior position in public opinion than one that is forced into regulations and demands from authority. In that sense, accreditation is beneficial to all stakeholders: institutions, students, and the general public. On the other hand, the United States and the global educational system are experiencing a paradigm shift in accountability measures, and it seems a perfect time for reflection and evaluation of the current U.S. accreditation system. The issues that have surfaced through public discourse, the Spellings Report, and the CHEA Initiative may result in a first-order change in the accreditation industry. Unless a major unexpected shift in course occurs, the identified issues will be incorporated into the accreditation process, and the leaders in higher education and accreditation will be required to respond to the requirements. The tensions between the federal government and accreditation and higher education communities for balance of power require constructive negotiations and collaboration to establish a structure that is best for the U.S. educational system and the citizens.

**Academic accreditation.** Academic accreditation is a complex system that has evolved from a simple concept of establishing educational quality assurance into a loosely coupled web of collaborative processes. According to the Council on Higher Education Association (CHEA, 2010c) website, "Accreditation is the primary means of assuring and improving the quality of higher education institutions and programs in the

United States” (para. 1). In order to understand the landscape of academic accreditation, several facets should be addressed. A historical perspective will provide a foundation for exploration of the current conditions, developing trends, and the future climate of accreditation in the United States regarding its position in the global arena of education.

**Structure.** The decentralized and complex accreditation structure in the United States is unique compared to most countries, which is reflective of the decentralized and complex structure of U.S. higher education (Eaton, 2009). Brittingham (2008) suggested that the American quality assurance system stands out in three factors:

- accreditation is a nongovernmental, self-regulatory, peer review system;
- nearly all of the work is done by volunteers; and
- accreditation relies on the candor of institutions to assess themselves against a set of standards, viewed in the light of their mission, and identify their strengths and concerns, using the process itself for improvement. (p. 10)

The CHEA (2010c) website lists four types of accrediting organizations in the United States. Regional accreditors focus on public and private, non-profit and degree-granting, two- and four-year institutions. The eight regional accreditation agencies service both higher education institutions and K-12 institutions. The national faith-based accreditors examine religiously affiliated and doctrinally-based institutions, mainly non-profit and degree granting. National career-related agencies accredit primarily for-profit, career-based, single-purpose institutions. Programmatic accrediting agencies focus on the specific programs that are housed in the higher education institutions, such as health professions, law, and teacher programs.

**Dynamics.** The accrediting associations obtain their status through a recognition process that is similar to the accrediting process of its institutional membership. The

CHEA and the Department of Education (DOE) independently establish standards that must be met by the accrediting organizations in order to be recognized. CHEA recognition addresses the academic legitimacy of the accrediting agencies' membership. The DOE recognition is required for agencies whose members seek eligibility for federal student aid funds (Eaton, 2009; CHEA, 2010b).

Over 100 years ago, accreditation began as a voluntary system and, theoretically, it still is considered a voluntary system. It is established that the accreditation emerged as a non-government controlled process, but an institution must be accredited to be eligible for federal financial support. This support may be viewed through student financial aid, grant monies, and research support, as well as other avenues. In today's climate, federal student financial aid is in excess of \$78 billion per year (Neal, 2008). If a college or institution were to lose accreditation, it may be a financial disaster.

**Role and responsibilities.** Academic accreditation specifies four major tasks in the mission: ensure quality assurance, provide access to federal and state funds, stimulate society's confidence in higher education, and support transferability (Eaton, 2009). Another piece of the accreditation industry's mission is to ensure quality improvement of higher education. Success in encouraging major innovation while maintaining quality is noted through the development of community colleges and the advent of student learning (CHEA, 2010c). Many states that carry out professional licensure require that graduates sitting for the examination for licensure have graduated from an accredited program. In addition, many states require that all professional programs offered at institutions within the state be accredited.

Accreditation of institutions and programs takes place on a continuing cycle that varies based on the situation. The cyclic process of developing standards, institutional

self-study, peer-review, and commission-based judgments ensure that accreditation in the U.S. is trustworthy, legitimate, and self-regulating as a process. Accrediting agencies provide legitimacy to organizations and schools seek out these bodies because accreditation enhances their reputations (Marion, 2005). To attain support from the public and private sector, schools must be perceived as creditable or legitimate. “Institutionalism is the process by which systems achieve legitimacy” (Human & Provan, as cited in Marion, 2005, p. 282).

**Standards.** A trend that is emerging in educational environments is that of accountability. Accreditors are accountable to the institutions and programs that comprise the membership. They also are accountable to the general public and government who have a large stake in the quality of higher education in America (Eaton, 2009). The CHEA website notes that one of the ways that accreditation serves students, society, and the public interest is by being responsive to the current climate of accountability. The current focus on student outcomes, institutional performance, greater transparency, and transferability are concerns being addressed in the established standards and study tools utilized by the accrediting bodies. A new generation of study tools, such as the Collegiate Learning Study, provides institutions with constructive feedback on how the students have performed and how the institution is performing in comparison to similar colleges and universities (Brittingham, 2009). The current U.S. accreditation system provides a starting block toward a consequential accountability system, but major modifications will need to be arranged. Rothstein, Jacobsen and Wilder (2005) suggested:

The American accreditation system includes many elements that could easily be adapted for accountability purposes....Regional associations could specify state-endorsed cognitive and behavioral outcomes, and the associations

could develop measurement tools to assess whether schools actually contribute to these outcomes - not only whether they follow appropriate instructional practices, but whether satisfactory student learning is actually achieved. True accountability would make accreditation mandatory, not voluntary; outside intervention and remediation would have to accompany serious warnings that might lead to loss of accreditation. (p. 629)

Important changes have been taking place in the accreditation model for K-12 schools worldwide, but in the United States there are some concerns that are surfacing (Bernasconi, 2004). The eight regional accreditation agencies have set standards that are qualitative in nature and generally equitable. Questions arise because of significant variances in the accreditation processes between the eight recognized regional agencies. In addition, the accreditation policy at the state level varies considerably across the United States. Some states do not require accreditation, a few require regional accreditation, and many have created their own state accreditation standards and processes (Bernasconi, 2004). Although a wide variety of thoughts on the accreditation process abound, the general trend in K-12 and higher education has been movement away from inputs or resources to focusing on outputs, processes, and effectiveness (Brittingham, 2009).

### **Professional Associations**

Professional associations are not-for-profit organizations established to benefit a particular profession. Carver (2006) notes that professional associations have a dual role of representation and regulation. The mission of a professional association may encompass a variety of objectives that seem conflicting in nature. The intention of endorsing professionalism of the highest integrity and advocacy for the individuals in the

profession appears at odds with the responsibility to protect the public interest by regulating the members (Friedman & Phillips, 2004). In addition, professional associations function as bureaucratic organizations and lobby for the professional interest in legislative concerns (National Institutes of Health, 2011).

## **Structure**

Watkins, Drury, and Bray (as cited in Friedman & Phillips, 1996) explained that the traditional governing structure for non-profit organizations is based on committed involvement of volunteers organized into large executive boards, complex committee structures, and a diverse membership. The governance is charged with determining mission, establishing strategy, and implementing policy in response to needs and expectations of the membership (Friedman & Phillips, 1996). The main source of income is membership dues, which implies that the members own the association. Carver (2006) cautions that this is overly simplistic because of the complex responsibilities of the association to both the members and the public. Friedman and Phillips (1996) pointed out that over the past two decades, members are demanding expanded services and greater support, while requesting the association advocate for the profession on government initiatives. Watkins et al. (as cited in Friedman & Phillips) argued that the traditional non-profit model of a large governing board, an overabundance of committees, and ceremonial decision-making processes are unable to adapt to these changing environments.

Kushner and Poole (1996) suggest no single governance structure is ideal for all associations, but that structural function is associated with organizational effectiveness. Structural dysfunction with the association governance may result in organizational failure. Bradshaw, Murray, and Wolpin (1992) posited that the size of the governing

board and the complexity of committees is not directly related to organizational effectiveness. Brown and Iverson (2004) argued that traditional governance model of non-profit organizations correlates with minimal proactive strategic planning. Murray (1996) suggested that, if an organization fails, it is not due to unfitting governance structure but may be because of unsuitable implementation of the model. Carver (2006) concluded that the governance structure of an organization is determined by history and circumstance. It is possible that the history and circumstances can produce structures that interfere with effective governance, especially in a complex and changing environment.

### **Dynamics**

Professional associations fundamentally operate as service organizations that provide opportunities for participation and product benefits to their customers, who are referred to as the membership (Gruen, Summers, & Acito, 2000). For these organizations to be effective, a healthy, committed relationship must be present between the association management and membership. Gruen et al. (2000) explained that these relationships are bound agreements based on economic investment by members through payment of dues and membership renewal in exchange for the benefits and professional opportunities supplied by the association. As other non-for-profit organizations, professional associations rely on volunteers to participate in the governance and delivery of services available to the membership. Bhattacharya (1998) pointed out that members can help the organization by volunteering time and donating money to support the mission of the organization. In the United States there are over 80,000 registered professional organizations representing a variety industries, professions, causes, and interests (Gruen et al., 2000). Bhattacharya reported that, in 1994 the top 50 organizations that sold individual memberships represented some 165 million people. In 2010 23 professional



associations and societies represented the pharmacy profession (Professional Societies and Associations, 2010).

Wilson (1995, p. 341) identified an extended list of variables that have theoretical and empirical support to influence relationships:

- commitment;
- trust;
- cooperation;
- mutual goals;
- interdependence/power imbalance;
- performance satisfaction;
- comparison level of the alternative;
- adaptation;
- nonretrieveable investments;
- shared technology;
- summative constructs;
- structural bonds; and
- social bonds.

Wilson (1995) suggested that commitment in relationships is the most important variable for the sustainability and future of institutional viability. In an attempt to understand the levels of membership commitment, Gruen et al. (2000) turned to research in organizational behavior and identified three categories of membership behaviors that are indicative of a committed relationship in membership markets: the retention rate, the extent of participation, and membership coproduction (p. 36). The retention rate refers to the percentage of members who renew their membership annually and is related to the

level of member satisfaction (Bhattacharya, 1998). The authors found that, if members have mutual goals and support the mission of the association, motivation to renew is present.

The extent of participation by members is reflective of the quality of members that are committed to the organization. Gruen et al. (2000) claimed that the most important aspect of membership quality is member participation (p. 36), which denotes the average usage of benefits offered by the association.

The second indicator of quality membership is coproduction (Gruen et al., 2000), which is the extent of membership involvement in the production of products, delivery of services, and association leadership. Early in the relationship, members tend to participate by being primarily consumers of products offered by the association. Over time, the development of trust and friendship, supported by quality products and services, results in stronger and valuable relationship. Morgan and Hunt (1994) believed that when commitment and trust are present, outcomes of efficiency, productivity, and effectiveness flourish. Gruen et al. argued that in committed, long-term membership relationships, customers become more involved in governance and participate in the coproduction and value creation of the organization. Wilson (1995) suggested that, when both parties give “non-retrievable investments” (p. 342), an increase is seen in value creation and stronger structural bonds. Morgan and Hunt (1994) suggested that cooperation and collaboration in professional networks are required by members of a profession for the profession to be competitive and effective in the global market (p. 20).

### **Role and Responsibilities**

Professional associations represent the interests of the membership and regulate the standards and strategic development of the profession. Greenwood, et al. (2002)

suggested three reasons that professional associations are important in the institutionalization of a profession: to provide the construct and management of intra-professional regulation, to act as a negotiating or representative agency, and to monitor compliance with institutional norms. Decision making within a profession about boundaries, membership, and behavior can be a political process (Dezalay & Garth, 1996). Professional associations provide a venue where stakeholders from the professional community interact and discuss competing interests. From the interactions and discussions, understanding of reasonable conduct and behaviors of the professional community are established (Greenwood et al., 2002).

The professional association represents the membership in interactions with external stakeholders and communities regarding the intra-professional agreement. Through negotiations with other stakeholders and the membership, the characteristics are shaped and redefined into the identity and distinctiveness of the profession. Once professional belief and practices are established, the professional associations play an important role in advocating value and monitoring compliance of institutionalized practices by the membership. This regulatory function is sustained through routines such as training and education, professional development, and disciplinary actions (Greenwood & Hinings, 1996).

Greenwood et al. (2002) also suggested that associations play an important role in times of deinstitutionalization or change within a profession. They suggested:

associations can legitimately change by hosting a process of discourse through which change is debated and endorsed: first by negotiating and managing debate within the profession; and, second, by reframing professional identities as they are presented to others outside the profession. This discourse enables professional

identities to be reconstituted. (p. 59)

Lalonde, Menendez, and Perron (2010) posited that health professional associations have the knowledge, skills, and abilities to be leaders in the campaign for practice change and improvement, to influence the remodeling of service delivery, and to advocate for policies that protect society. Strong associations may be able to identify barriers present in the community and promote innovative ways to address them. Lalonde et al. identified commonalities among these professional associations:

- develop and promote standards of care and innovative practices;
- assume leadership in the establishment of standards of education, practice, and professional competency studies;
- participate in training programs and continuing education activities;
- act as technical advisors in national working groups;
- promote collaborative practice; and
- work with government and other stakeholders in developing, implementing, monitoring, and evaluating health policies and programs. (p. 2134)

Professional associations have important regulatory roles and responsibilities and contribute to the institutionalization and legitimization of a profession. Greenwood et al. (1996) found that associations play a vital role when a profession is going through a change process. Professional associations are important during the deinstitutionalization and reframing of a professions' identity. Macpherson (2010) recommended that professional associations review and refine their services that align with the needs and expectations of the membership. Macpherson surveyed educational leaders and found they want the professional associations to provide services related to professionalization of the industry, instead of acting as a representative of the industry.

## **Degree Classifications**

Higher education leaders, government officials, and business executives have been engaged in detailed discussions about learning, calling for an increase in the proportion of Americans with high-quality degrees and credentials (Hebel, 2010). Mark Bouchard, chairman of the Salt Lake City Chamber of Commerce's effort to improve education in Utah stated, "Education is the greatest single asset we have in society today" (cited in Hebel, 2010, p A4). The Lumina Foundation on Education is a leader in the efforts to increase higher education attainment rates in the United States. The challenge, "Lumina's Big Goal," calls for the proportion of the U.S. population that holds a high-quality postsecondary degree or credential to be 60% by 2025 (Lumina Foundation for Education, 2010, p. 1). Lumina believed "the value of degrees and credentials--both for the individual and society as a whole--ultimately rests on the skills and knowledge they represent. The quality of the degree or credentials has well-defined and transparent learning outcomes that provide clear pathways to further education and employment" (p. 1).

In the workforce, job applicants are partially evaluated on their credentials. The decipherment of the wide range of academic degrees, training certifications, and licenses to practice is a challenge for employers (Nemec & Legere, 2008). Society has a strong reliance on paper credentials, and no meaningful system exists to interpret their significance. Contreras (2004) suggested that reliance on degrees does not serve a public interest and that there is a difference between a degree and a skill set or knowledge. Contreras argued that we are inundated with degrees that have been devalued, and degree programs that get longer and longer are not producing graduates with greater skill sets or knowledge.

## **Academic Degrees**

The academic degree is described as a cultural artifact and a symbol of American postsecondary education (Glazer-Raymo, 2005). In the United States, academic degrees come from many sources, and the nature and function of the degree may be perceived differently from source to source. An academic degree is a title conferred by universities and colleges when successful completion of courses has been achieved as determined by the degree-granting institution (Random House Dictionary, 2005). The institution and individual programs within the college or university should hold accreditation from a reliable and nationally recognized accreditation agency (Nemec & Legere, 2008). According to the National Center for Education Statistics (NCES), the academic degree is sought after in ever-increasing numbers across every demographic. The NCES reported that, in 2006, more than 2.9 million academic degrees were conferred in the United States. They estimate this number will reach nearly 3.5 million by 2017 (National Association for Educational Statistics, 2008). The academic degree allows the student to proceed through the hierarchy of academic endeavor from bachelor's, master's, and doctor's degrees or into the workforce.

**Baccalaureate.** In the United States, a bachelor's degree is the foundational post-secondary award, usually requiring three or four years of study (Random House Dictionary, 2005). The Common Data Set of U.S. Higher Education Terminology (2010) defined a bachelor's degree as:

an award (baccalaureate or equivalent degree, as determined by the Secretary of the U.S. Department of Education) that normally requires as least four years but not more than five years of full-time equivalent college-level work. This includes ALL bachelor's degrees conferred in five-year cooperative (work-study plan) programs. Also, it includes

bachelor's degrees in which the normal four years of work are completed in three years.  
(n.p.)

The program content and completion requirements for a baccalaureate degree are not consistent among degree granting institutions, which may interfere with the transferability of course credits. In the 1998 *Statement to the Community: Transfer and the Public Interest*, the CHEA inquired about the transfer process and academic quality and began a campaign to organize the process. They acknowledged that student mobility and opportunities in higher education depend in part on successful transfer of credit (CHEA, 2002).

In response to the changing economy, there is increasing demand for baccalaureate-level education for certain jobs that never before required these credentials (Ruud, Bragg, & Townsend, 2010). The need to respond to workforce demands has placed academic institutions in a position of workforce development. Ruud, Bragg, and Townsend explained that this situation has given rise to a new and innovative degree known as the Applied Baccalaureate. Supported by the Lumina Foundation for Education, the authors used telephone interviews and document analysis to better understand why “the degree was emerging as a means to facilitate baccalaureate completion for adults who accumulated some college credits but failed to obtain a degree and for adults who had not enrolled in college” (p. 138). They found that many states indicated a dedication to general baccalaureate attainment within their state. The Kentucky Council on Postsecondary Education, as cited in Ruud et al. (2010), implemented the Double the Number campaign to “double the number of bachelor's degree holders in the state by 2020” (p. 140). Ruud et al. suggested that these types of initiatives have brought together community colleges and traditional institutions to

develop the Applied Baccalaureate from a desire to enhance the states' overall baccalaureate attainment rates.

**Postbaccalaureate.** Storr noted (as cited in Glazer-Raymo, 2005) that in the early years of American higher education, the baccalaureate was the only earned degree awarded following completion of a course of study. The master's degree was a conferred honorary degree awarded at commencements and graduation ceremonies. In 1851 Henry Tappan, president of the University of Michigan, instituted the Masters of Arts (M.A.) and Masters of Science (M.S.) as earned degrees aligned with the undergraduate baccalaureate and the research doctorate, the Doctor of Philosophy (Glazer-Raymo, 2005). Master's programs emerged as the degree of choice in professional fields, while the research doctorate was the degree of choice for those pursuing a career teaching in the expanding higher education system. In 1909 the newly established Association of American Universities (AAU) declared a need for organization of postbaccalaureate education and called for a definition of purpose of the master's degree, resulting in the hierarchy of academic degrees that we understand today. The hierarchy of academic degrees begins with the undergraduate baccalaureate as the foundational degree and a pre-requisite for advancement to higher levels of education. Postbaccalaureate, or graduate academic degrees, are granted at the master's level as a free-standing professional degree, and the research doctorate is the gold standard in the graduate degree hierarchy (Berelson, 1960).

**Master's.** During the 20th century, there was persistent promotion of higher academic standards in graduate education occurred. The Association of American Universities (AAU) study of the master's degree in 1909 and the 1910 Flexnor Report on medical schools made the standardization and professionalization of graduate education a



priority. As academic leaders struggled to establish standards and structure, a rapid expansion was seen of professional fields and proliferation of diverse master's programs in professional and academic fields, leading to a potentially chaotic situation (Thelin, 2004).

In the 1960s the Association of Graduate Schools declared that the master's degree needed to be "rehabilitated, revitalized, resuscitated, refined, and readjusted" (Glazer-Raymo, 2005, p. 9). The American Council on Education responded by forming the Committee on Academic Degrees in 1962 charged with investigating the proliferation of master's degrees in professional and academic fields. Recommendations for standardization and professionalization were made from various stakeholders, including a proposal by Stephen Spurr, then president of the University of Texas at Austin, that suggested a one-year academic master's, a two-year professional master's, a three-year professional, and a four-year doctorate (Spurr, 1970). In 1973 the Council on Graduate Schools proposed that the ideal master's degree program consists of:

Preplanned and coherent sequence of lectures, seminars, discussions, and independent studies or investigations, designed to give the student the opportunity to learn from original sources in the library, from studies conducted in the laboratory, through creative scholarship (whether research or professionally oriented) and through research or professional practice in the field. (as cited in Grazer-Raymo, 2005, p. 11)

Colleges and universities began to adapt the degree in response to a growing demand for advanced education for entry into professional work, compared to merely a step toward the Ph.D. path. O'Brien (1992) explained that the transformation occurred at the institutional level, with master's degree programs being adapted to offer subject

specialization, professionalization, and career development. Conrad, Haworth, and Millar (1993) summarized the findings of a Council of Graduate Schools' sponsored study of master's degrees, establishing that the degree is recognized as a significant, and often terminal, credential for managing entry into and advancement within many professions.

The growth in practitioner-oriented education has expanded the landscape of master's level education. Educators have developed various strategies to meet the changing landscape at an institution-by-institution basis, making the standardization and professionalization of the master's degree more complex (O'Brien, 1992). Haworth, Conrad, and Polster (2012) stated that a national database is not maintained to track or investigate master's degree programs, providing little understanding about the general purposes, quality, and value of the master's degree and master's education in the United States.

***Doctorate.*** The purpose of doctoral education is to prepare an individual with mastery of advanced knowledge, scholarly research skills, and the ability to apply theory to practice in the discipline in which the degree is earned (Clement, 2005). Two main classifications of doctorate degrees are the research doctorate, named a Doctor of Philosophy (Ph.D.), and the professional doctorate that traditionally was a "pre-service" high-level degree that served a role in the preparation for entry into a profession.

The research doctorate has traditionally been regarded as the highest degree on the hierarchy of academic degrees and understood and recognized internationally. However, in many fields today, especially the natural sciences, the post-doctorate has become implicitly the terminal degree in these areas, and employment without this holding is highly unlikely. In large part this is because the post-doctorate often serves as an apprenticeship toward participating in and then acquiring the funding necessary to set

up one's own lab to continue research in some specialized aspect of cutting edge investigations (Cook, Irby, Sullivan, & Ludmerer, 2006).

The professional doctorate is diverse across a broad array of disciplines and has important structural and conceptual differences that vary from country to country (Neumann, 2005). In recent decades, the professional doctorate has become increasingly popular, especially in Australia and the United Kingdom (Bourner, et al., 2000; Jolley, 2007). Professional doctorates are not new to U.S. higher education, but in the past decade a new category of professional doctorates is emerging, particularly in health care, that is creating confusion regarding their classification in doctoral education (Task Force on the Professional Doctorate, 2006). Jolley indicated that much of the confusion surrounding doctoral education can be attributed to the differences in nomenclature between the countries. He summarized the scenario:

In the first half of the 20th century the U.S. began a proliferation of professional doctorates, which were designed as pre-professional qualifications. In this way, the U.S. MD is not an equivalent of the Ph.D. or even the British MD either in design, level, or a preregistration qualification. In Australia, however, the expanding portfolio of professional doctorates has always been intended for the population of qualified professionals. Should this not be confusing enough, it must also be appreciated that by the 1920s, the US Ph.D. had begun to incorporate a significant teaching element, introducing a degree of similarity (and confusion) with the post-qualifying professional doctorates in the rest of the world. (p. 227)

Allen, Smyth, and Wahlstrom (2002) argued that the independence of study associated with the Ph.D. is undesirable for many individuals, but they do desire the internationally recognized Ph.D. award.

In the United States, the first Ph.D. was conferred at Yale University in 1861, while the first professional doctorate, the Doctor of Education (Ed.D.), was awarded at Harvard University in 1921 (Bourner et al., 2001). Neuman (2005) suggested that the original intention was that the professional doctorates would be an alternative to the research doctorate and viewed as “complementary” (p. 183) in some fields such as education. Scott, Brown, Lunt, and Thorne (2004) believed the emergence of the professional doctorate was in response to the changing roles of the university and society in the production and use of knowledge, pressures for more diverse and professionally relevant programs, and the expansion of higher education. The authors linked the recent proliferation of professional doctorates to the demand from professions and workplace requirements for increased skills and knowledge; the emphasis on “evidence-based” practice; and new understandings about knowledge creation, form, and production. Bourner et al. suggested that the professional doctorate can be seen as “the coming of age of work-based learning” (p. 74). Brown and Lauder (2001) contended that national prosperity in a competitive global economy depends on upgrading the knowledge and skills of the workforce.

Scott et al. (2004) proposed that the growth in the professional doctorate parallels the increasing criticism of the traditional Ph.D. in terms of its narrow focus, the limited skills acquired by candidates, and its isolation in general from the workplace. The status of the Ph.D. is being challenged by the increased availability of doctoral degrees (“Ph.D.-club or history?,” 2004). Brown, Hesketh, and Williams (2003) suggested that a knowledge-driven economy is a strong force in the rise of mass higher education, especially for the terminal doctorate. This is documented by the increase of doctoral programs and new degrees that have risen in the past decade. These “knowledge

workers” expect to command high levels of general and specialized skills when they leave the university with graduate qualifications (Brown et al., 2003, p. 110; Tennant, 2004). Neumann (2005) concluded that the individual student, not standard curricular content, should be responsible for initiating any connection between workplace and research. “In general the lack of involvement of professional doctorate programs in industry, workplace or profession was striking” (Neumann, 2005, p. 185).

Park (2005) contended that traditional Ph.D. programs are responding to the criticism by transforming the structure and content that can muddle the distinction between the Ph.D. and the professional doctorate. Traditionally, no explicit national standards or guidelines existed for doctoral education as a whole, but that is a current topic in higher education today. Neumann (2005) found the structure of educational programs and learning outcomes were similar between the Ph.D. and professional doctorates, and fundamentally the two doctorates are interchangeable. The major differences were the target population and selection criteria for students (Jolley, 2007; Neumann, 2005). “The only distinction between the two would be the award name and the students’ choice to best meet their career needs at any given time” (Neumann, p. 185).

**Entry-level doctorate.** The first professional doctorate was originally introduced as a “pre-service” high-level credential that was instrumental in the preparation for entry into a profession. Programs of study were offered in professional schools and universities, incorporating a substantial element of coursework and research related to professional practice. The discipline of study was identified in the degree title (i.e., M.D., J.D., Pharm.D.). A first professional degree is a first degree, not a graduate degree, even though it incorporates the word *doctor* in the title (NCES, 2008). The National Center for Educational Statistics classified first professional degrees “as those awarded after

completion of academic requirements to begin practice in the following professions: chiropractic (D.C.); dentistry (D.D.S. or D.M.D.); law (LL.B or J.D.); medicine (M.D.); optometry (O.D.); osteopathic medicine (D.O.), pharmacy (Pharm.D.); podiatry (D.P.M., D.P., Pod.D.); theology (M.Div., M.H.L., B..D, or Ordination); or veterinary medicine (D.V.M.). Royeen and Lavin (2006) distinguished between the entry-level clinical doctorates and post-professional clinical doctorates that were first introduced in pharmacy's transition to the entry-level Pharm.D. Several disciplines are present within the health professions such as physical therapy, nurse practitioner, and occupational therapy that are elevating the entry-level degree required to practice to a doctorate level.

**Clinical.** In the past decade, several doctoral programs have emerged, notable in the area of health care. These often are referred to as clinical doctorates or practicing doctorates but are not the same thing as a research doctorate or a professional doctorate in title or content. Clarity in terminology is relevant in discussions related to the context of the clinical doctorate (Royeen & Lavin, 2006). The authors posited that, in our society, the term *doctor* is notably associated with a physician. This means:

The nature of the degree needs to be clearly communicated to the public for whom they care and that professionals identify themselves as physicians, nurse practitioners, physical therapists, occupational therapists, and so on instead of using the term *doctor* as if it were synonymous with one professional group. (p. 102)

Inconsistency is found among the diverse programs related to length, rigor, content, or ultimately the usefulness to the person who achieves them. Some serve as a license to practice, while others may be the terminal practice degree for advanced practice (Royeen & Lavin, 2006). In general, many professional doctoral candidates have

experience in or are currently working in their professional fields. The programs are primarily focused on the application of theory and knowledge to specific, professional problems, rather than trying to create new theories or knowledge, as in the Ph.D. track. Royeen and Lavin (2006) explained, “the clinical doctorate refers to knowledge and skill needed to deliver complex and advanced service/care within the scope of practice of a health care professional” (p. 102). Lester (2004) revealed that the practicing doctorate requires conceptualizations that are not defined by academic research and the generation of knowledge. Graduates of a clinical doctorate will be able to serve as practitioner-researchers. More importantly, graduates of a clinical doctorate will be capable of high-level thinking: “thinking and action needed to create significant and considered change and development in complex practical situations” (Lester, 2004, p. 762).

**Certification.** Certification is a voluntary process by which a non-government entity, such as professional association or credentialing body, awards recognition to an individual who demonstrates completion of standardized criteria (National Organization for Competency Assurance [NOCA], 2006). It is a method that a profession or occupation uses to differentiate among its members based on predetermined standards for knowledge, skills, and competencies (Nemec & Legere, 2008). The majority of certification programs are classified as either attendance-based or study-based certifications, or a combination of both. Attendance-based certification programs require individuals to complete a certain amount of instructional time, but no formal study is demanded (Nemec & Legere, 2008). Study-based programs require participants to complete a formal evaluation that demonstrates the acquired knowledge, skills, or competencies. In addition, NOCA (2006) described an academic certification or “curriculum based certification” (p. 7) as completion of a series of courses, each with its

own completion requirements that can be demonstrated by official transcripts.

Over the past decade certifications have grown rapidly in vendor-specific technologies (Varhol, 2000). An example in health professions is in diagnostic imaging. These types of certification ensure that the vendor product is utilized correctly and consistently based on standard implementation. These certifications may add new skills for an individual but are not a foundation to build a career (Varhol, 2000).

**Licence.** License and licensure is the mandatory process by which a government agency, typically at the state level, grants permission for an individual to legally engage in a profession or occupation (Nemec & Legere, 2008). A license is a method of ensuring that a person has been deemed worthy to engage in an occupation before the public.

### **Elevation of Clinical Doctorate as Entry-Level Degree**

A controversial issue facing many disciplines in the health professions is the rapidly precipitating movement toward establishing the Clinical Doctorate to be the entry-level degree into practice. This is not a new topic of discussion among the leaders in the professions. Douglas (2005) suggested that the conversation of the doctorate of nursing has been debated for over 25 years but really gained momentum in October 2004 when the American Association of Colleges of Nursing (AACN) adopted a position statement: “The AACN calls for a transformation of the education appropriate for nurses who will be practicing at the most advanced level” (p. 6). Griffiths and Padilla (2006) claimed that the proposal of the Doctor of Occupational Therapy (OTD) surfaced in 1993 as the accumulation of a 40-year debate (p. 541) and has progressively gained support from the American Physical Therapy Association (APTA). In 2005 the APTA vision statement included “that all physical therapy services will be provided by doctors of physical therapy by the year 2020 (Massey, as cited in Griffiths & Padilla, 2006, p. 541).



Swanchak (2010) claimed that the main controversy around the elevation to the clinical doctorate as an entry-level degree is related to the reasoning or motivation of the individual seeking the degrees. Many health professions are somewhere in the progression of transitioning toward awarding clinical doctorates as first degrees, citing the necessity for advanced knowledge and skills to be effective in the rapidly changing and complex health community (Swanchak, 2010, p. 12). As Ellis (2007) noted, the professional doctorate for the health and social care professions is a “product of its time” (p. 2272), but there is minimal empirical or theoretical information can be found on the effects of this evolving situation. William Siler and Diane Randolph (as cited in Dickerson & Trujillo, 2009) examined arguments for and against the elevation of the professional degrees to the clinical doctorate. According to Dickerson and Trujillo (2009), “Their conclusion was that neither universities or professional organizations objectively evaluate clinical doctorates and they suggested that an external study, such as the Flexner Commission, should be done to establish uniform criteria” (p. E47). Studying the experiences of other health professions that have successfully made the transition to the clinical doctorate, such as pharmacy and physical therapy, may be helpful (Cartwright & Reed, 2005).

Within the past two decades, several new doctoral programs have been created in the health care fields. Collier (2008) considered that the workforce shortage in many health professions has educational institutions and policy makers trying to address the rapidly changing needs of the health care system. The health workforce dynamics are important in understanding the health care environment, and credentialing requirements are an underlying theme among many health professions. Collier (2008) reported that employers and educational leaders have expressed concern about the increasing degree

levels in several health professions, especially as it relates to the cost of health care and other health systems dynamics.

Referred to as *clinical doctorate*, *professional doctorate*, or *practicing doctorate*, most of these new programs do not possess the same content or title as the research doctorate in the specific discipline, nor do they consistently follow the historical model of the “1st professional doctorate,” as defined by the National Center for Educational Statistics (NCES) (Higher Learning Commission, 2006, emphasis in original). The NCES model concludes that the course of study for a first professional degree is typically three years of study post-baccalaureate (NCES, 2008). According to the Higher Learning Commission (2006), the various professions have defined the essence of each program, but “there seems to be no obvious consistency among the various degrees as to length of study; rigor, substance, or content of the program; or the ultimate utility of the degree to the person who earns it” (Higher Learning Commission, 2006, p. 1). For example, Kontogianes (2004) described an innovative program that has been established to address the shortage of pharmacists in Oklahoma. Instead of having to complete the baccalaureate degree first and then transfer for the additional three years for the doctorate, this unique program “takes the student seamlessly from high school to the doctorate in six years” (Kontogianes, 2004, p. 47) by allowing the student to receive an associate degree and then transfer directly into a doctoral program at a four-year university. Kontogianes (2004) declared that the need for pharmacists is so great that these programs must be developed quickly and must promptly produce properly trained and competent pharmacists.

The recent emergence of the clinical doctorate primarily falls into two categories: those that have changed the entry-into-practice level for new graduates through the

accreditation process of educational programs, and those that allow for advance practice beyond the entry-level (Collier, 2008). Collier suggested:

Even in the absence of a mandate from the profession or its educational program accreditation group, there has been rapid movement to the clinical doctorate due to market forces of educational programs competing for potential students. (p. 7)

Various stakeholders are involved in this high profile debate: professional organizations, employers, educational leaders within and outside of the professions, and regional accreditation agencies. Those that support the transition to the clinical doctorate focus on the expanded knowledge base, technological advances, and expanded clinical experiences (Collier, 2008). Opponents to the move to the clinical doctorate are concerned about the creation of greater workforce shortages, increased educational costs, and public confusion with the number of new types of “doctors.” Some who strongly oppose the elevated entry-level degrees believe the move to is to gain professional power rather than a response to market demand (Collier, 2008).

The decision to move to the clinical doctorate level may pose problems for the institutions that have offered the master’s degree program but do not have doctoral-granting authority or the transition does not parallel the university mission. When institutions decide to create a new doctoral program, they must ask the regional accreditation agency to extend the college or university accreditation to include the new professional doctorate. So many variables and variations are associated with this new educational trend that the quality assurance agencies do not have reliable or valid evaluation tools to ensure quality assurance of the clinical doctorate programs.

In 2005 the North Central Association of Colleges and Schools established a Task Force on the Professional Doctorate and charged the committee to study the current

trends and expansion in program creation of the professional doctorate and provide recommendations of the best ways to provide quality assurance. The Task Force initiated a national discussion in various forums, and the recommendations were organized into three major concerns: Institutional context, core characteristics of program content, and shared quality assurance. The Higher Learning Commission (2006) accredits colleges and universities not specific programs; therefore, the primary focus is on the capacity of the institution to construct and support effective programs that award a professional doctorate. The Higher Learning Commission (2006), together with other accreditation bodies, defines core characteristics of a professional doctorate program based on uniform competencies from those who practice the profession across the nation. Although the specific program content is accredited by specialized accreditation agencies, the institutional accreditation bodies evaluate how well the new degree program is fulfilling the core characteristics and uniform competencies that have been established. The Task Force on Professional Doctorates emphasized the importance of the Higher Learning Commission to collaborate with professional and specialized accreditation bodies in the establishment of standards for professional doctorate programs.

While it is so vitally important that conversations be held with specialized accrediting bodies, the Task Force agreed that institutional accrediting bodies should not defer to specialized agencies if they conclude that the profession's degree is lacking in the substance or rigor appropriate to a professional doctorate. (Higher Learning Commission, p. 12)

### **Pharmacy**

Over the past 150 years, pharmacy education in the United States has evolved from an apprentice model to a six-year professional doctorate degree. The incremental

changes that occurred were prompted by changes in pharmacy practice and public expectations and by academics in an attempt to move the practice forward (Cohen, 2008). The issues of the appropriate curricular content, length of study, and degree name have been the subject of considerable debate in the profession throughout the 20th century.

**Theoretical perspectives.** During the 19th century, pharmacy education occurred through the apprentice model, mainly because very few university programs existed. In the report that transformed medical education, Abraham Flexner concluded that pharmacy was “an arm added to the medical profession, a special and distinctly higher form of handicraft, not a profession” (Cohen, 2008, p. 103). According to Buerki (1999), the first discussions about establishing a uniform structure of pharmacy education occurred around 1870 within the American Pharmaceutical Association (APhA) and in the late 1890s within what is now called the American Association of Colleges of Pharmacy (AACP). The accreditation mandate of a four-year Bachelor’s degree as a minimum requirement for pharmacy practice was achieved in 1932. Momentum to standardize and improve pharmacy education continued until World War II. Cohen explained that, during the depression, the public perceived pharmacists “as retailers and in great oversupply” (p. 104). This prompted academics to call for increased science and rigor in pharmacy programs versus training in retail and management, a conversation that continued until the 1970s (Buerki, 1999; Cohen, 2008). Concerns about curriculum, the state of the profession, and the public and government image of pharmacists were studied, analyzed, and changed on a steady basis for the next 30 years. Finally, in the early 1990s there was consensus that the professional practice model should be “pharmaceutical care” and the Doctor of Pharmacy be established as the sole entry-level degree into pharmacy practice (Buerki, 1999; Cohen, 2008).

The success in achieving a professional doctoral level education will enable pharmacists to be prepared to serve in a variety of practice settings as well as be agents of change in the complex healthcare system (Brazeau et al., 2009a). Holland and Nimmo (1999a) proposed an innovative model to assist pharmacy leaders facilitate practice changes in the current complex and diverse pharmacy environment. They believed that, in order to maximize change in pharmacy practice, three interrelated components must be fulfilled by leadership: creation of an environment conducive to a new form of practice, availability of appropriate training for practitioners, and motivational strategies of practitioners to change. Holland and Nimmo (1999b) suggested that two main factors contribute to individual pharmacists' responsiveness to a change in practice: their personality and their professional socialization. "Professional socialization is the process by which a student or young practitioner acquires the roles, behavior, and attitudes expected of a member of the profession involved" (Goldenson, as cited in Holland & Nimmo, 1999c, p. 2459). Faculty members, preceptor/internship experiences, and fellow students influence this socialization. Holland and Nimmo (1999b) concluded that the proposed practice model requires changes in responsibilities and duties that may not be compatible with a pharmacist's personality, resulting in a resistance to change. Therefore, professional re-socialization to the newly established roles, behaviors, and attitudes expected by a doctor of pharmacy is vital for the professionalization of pharmacy.

In 2008 the Curricular Change Summit leaders recommended that the focus of pharmacy education programs must continue toward a professional doctorate level and that graduates should and will remain in community practice (Brazeau et al., 2009a). Cohen (2008) suggested that the community pharmacist is a key individual who can provide patient care and education on medications, improving the quality of patient's

lives. One concern is that the current system of reimbursement for pharmacists is primarily based on dispensing prescriptions. Cohen (2008) stated that a “large statistically sound study” (p. 107) documenting the important role the pharmacist plays in patient care is necessary to alter reimbursement methods. “Ultimately for pharmacists to realize their full potential in our system serious reform and altered payment systems are needed that will recognize the value of time spent in patient care and not just dispensing” (Cohen, 2008, p. 107).

In addition, Cohen (2008) expressed that, although pharmacy practice and pharmacy education have embraced the patient care practice model, confusion exists on the part of the public and other health care providers as to the expected standards across the profession of pharmacy. Many accept the value pharmacists add in patient care, especially in hospitals and clinic settings, while others continue to view pharmacists as commercial retailers and not as a true health care professional. “Until we get uniform acceptance from patients, providers, and health care payers of the value that pharmacy brings to health care there will be debate and controversy about the curriculum and the future” (Cohen, 2008, p. 108).

**Empirical investigations.** In 1946 the American Association of Colleges of Pharmacy (AACP), together with other national associations, conducted a survey that focused on the internal issues of the pharmacy profession. The Elliott survey, named after the primary investigator Edward C. Elliott, found that members of the occupation believed there was a professional nature of pharmacy, but that the public perception was much less (Elenbaas & Worthen, 2009). Elliott’s report, the *General Report of the Pharmaceutical Survey* (as cited in Elenbaas & Worthen, 2009), concluded that the four-year curriculum of pharmacy education was not sufficient to provide the scientific

content required of the profession and the general education component of a post-secondary education. The recommendation was to move to a six-year degree program that would make possible the granting of a professional doctorate.

Pharmacy educators had mixed response to the Elliott survey; some agreed the changes were necessary and others were strongly opposed to any curricular modifications. In 1948 the AACP published a position paper that supported the doctor of pharmacy degree for six years, specifying two years of pre-pharmacy followed by four years of professional education (Kendig, 1948). In 1950 the University of Southern California was the first college to commence the entry-level six-year Pharm.D. degree program, dissolving the Bachelor of Science program. The University of California San Francisco (UCSF) in 1955 and the University of Michigan in 1961 followed this inauguration (Elenbaas & Worthen, 2009). It would be many years before other institutions would follow these leaders in the development of entry-level Pharm.D. programs.

Several years after the Elliott survey, the Millis Study Commission on Pharmacy investigated pharmacy from an external societal perspective rather than an internal perspective such as the Elliott survey (AACP, 2000; Worthen, 2006). The focus of the Millis study, conducted between 1973-1975, was to gather perceptions “for what should they be educated” (Worthen, 2006, p. 5). The final report, *Pharmacists for the Future*, suggested that pharmacists should be trained with other health professionals at the bedside of the patient, not behind the prescription counter isolated from the clinical aspect of medicine (Worthen; Elenbaas & Worthen, 2009). This introduction to “clinical pharmacy” was met with mixed responses from educators and professional leaders. These results were supported by the 1967 study by the Task Force on Prescription Drugs that



investigated the impact of extending outpatient prescription coverage to Medicare patients (Worthen, 2006). The Task Force concluded that the perception of the pharmacist “is viewed by many people as simply transferring pills from a large bottle to a small one--counting tablets, typing labels, and calculating the price” (Task Force on Prescription Drugs, 1967, p. 19). On the other hand, the Task Force commended those pharmacists who were providing direct patient care, including accompanying doctors on hospital rounds and managing patient use of medication. According to Elenbaas and Worthen (2006), throughout the 1970s and 1980s the clinical pharmacy concept was becoming rooted in the practice model and the movement of the Pharm.D. as the entry-level professional degree was gaining steam, but the two were not synonymous.

The issue of the six-year curriculum leading to the Pharm.D. as the entry-level degree into pharmacy practice was at center stage for pharmacy education leaders for over three decades, beginning with the 1950 report of the Pharmaceutical survey. In 1981 the American Pharmacists Association (APhA) conducted an exhaustive review of pharmacy education that concluded with the recommendation that the six-year Pharm.D. should be the entry-level credential into practice (Miller, 1989). As the AACP president, Miller formed the Commission to Implement Change in Pharmaceutical Education and charged the Commission to develop a strategic plan to establish standards for pharmacy education in the 21st century. A few months later, the American Council of Pharmaceutical Education (ACPE) announced the accreditation mandate that established the Pharm.D. as the sole entry-level degree into pharmaceutical practice, with implementation for the entering class of 2000 (Commission to Implement Change in Pharmacy Education, 1997a).

The AACP Commission to Implement Change in Pharmaceutical Education

convened over three years and produced a series of background papers and recommendations. The third background paper recommended that AACP support the Pharm.D. as the sole entry-level degree, and in 1992 the AACP House of Delegates voted in favor of the professional doctorate as the sole entry-level (Commission to Implement Change in Pharmacy Education, 1997a). One year later, the ACPE issued revised accreditation standards and guidelines for the Pharm.D. degree programs. Curriculum Standard 8 stated that students must be prepared for the “emerging roles that ensure the rational use of drugs in the individualized care of patients” (ACPE, 1993, p. 15). One more accreditation standard revision in 1997, which included the implementation date of 2000, finally solidified the 47-year professional debate that began with the 1950 Elliott Report that had called for a six-year professional doctorate as the sole entry-level degree in pharmacy.

Boyden (2006) conducted a qualitative study for the purpose of understanding the motivations behind the decision to mandate the entry-level Pharm.D., the benefits associated with the transition, and the future of pharmacy education. The investigation included case studies of two selected pharmacy schools that had distinct experiences in the degree changeover process. Through extensive interviews with leaders of the two institutions, Boyden (2006) concluded that the chief motivations that led to the adoption of the entry-level Pharm.D. as the sole degree were degree uniformity across the profession; the gain in prestige with a title of doctor; and “the appropriateness of giving those with a minimum of six years of intensive, challenging didactic and experiential education a high-level, terminal degree” (p. 160). In addition, Boyden stated that graduates who engage in clinical and therapeutic settings have greatly benefited from the entry-level Pharm.D. decision but those who practice as community pharmacists have not

had opportunities to utilize the advanced knowledge and skill sets they acquired.

At the 2008 AACP Curricular Change Summit, the focus was on the transition from educating pharmacists with a product focus to educating pharmacists to provide patient-centered care (Brazeau et al., 2009b). Although the Accreditation Council for Pharmacy Education (ACPE) Standards 2007 defined the expanded and expected professional competencies, AACP President Yanchick stated in his address at the Summit, “We must transform pharmacy curricula away from a baccalaureate-level focus to a professional doctoral-level focus” (Brazeau et al., 2009b, para. 2). Brazeau et al. (2009b) summarized the conversations that occurred at the 2008 AACP Curricular Change Summit in a list of recommendations for consideration by the AACP and its member institutions related to the future of pharmacy education:

- educational programs must provide opportunities to the changing health care and economic climate;
- graduates must:
  - do their part to make health care more beneficial and cost effective,
  - embrace information technology,
  - have the skills and confidence to be adaptable and flexible to changes in their professional careers,
  - take responsibility for continued professional development,
  - be willing to work collaboratively,
  - engage their communities,
  - be leaders and advocates,
  - be culturally competent, and
  - assume the responsibility to address society’s needs.

Cooksey, Knapp, Walton, and Cultice (2002) presented data from the 2000 National Pharmacist Workforce Study that described a “dynamic shortage of pharmacists” (p. 182) reported to be apparent as early as 1998. The shortage is a result of several factors including: an increase in prescription drug use, expansion of pharmacists’ roles and nontraditional job markets, limited use of automation, inefficiencies in the workforce, and greater numbers of female pharmacists who tend to work fewer hours than men (Cooksey et al., 2002). The 2009 National Pharmacist Workforce Study was focused on examining the association of the Pharm.D. degree with time spent dispensing medication and patient care (Kreling et al., 2010). The data showed that pharmacists who practice in community settings spend the majority of time on dispensing activities, regardless of the educational degree. In hospital settings, more time was allotted for patient care for pharmacists with a Pharm.D., and pharmacists with a B.S. degree handle the dispensing activities. Kreling et al. (2010) suggested that the current trends, such as the increasing age of the population and continued increase in prescription drug use, indicate a need for pharmacists practicing in community practice settings. What continues to be unclear is how the need for patient care from pharmacists will grow, especially in community settings.

### **Other Health Profession Disciplines**

The growth in clinical doctorate programs is rooted in the changing demographics, scientific developments, and technological advances in health care. Primary health care providers such as pharmacists, nurse practitioners, occupational therapists, and physical therapists are necessary partners in promoting health and preventing disease. Health professionals must be educated in diverse knowledge and skills that were not previously considered within their scope of practice, but are now

identified as critical to understanding the healthcare needs of society.

**Nurse practitioner.** Purdue University School of Nursing (PUSON) has been a leader in the development of innovative curricular opportunities in the Doctor of Nurse Practitioner (DNP) program. Drs. Wall, Novak, and Wilkerson (2005), faculty at PUSON, share the developmental process experience so that other schools may benefit from the experience as they develop their own DNP programs. Many schools of nursing are in various stages of development or implementation of DNP programs. This article provides a step-by-step process of development of a unique program that uses interdisciplinary resources to result in highly qualified providers. This case study provides insight into important elements of development process, student demands, curriculum design, and program evaluation that can be generalized to institutions that are developing clinical doctorate programs in other allied health disciplines. The most unique feature of this program, making this case study a valuable resource, is the interdisciplinary collaboration that is supported at a variety of levels (Wall et al., 2005, p. 401). The charge of improving the integration of health disciplines and reengineering the health delivery system has been given to leaders at all levels of health care. Each university setting will have opportunities for collaboration with multiple disciplines, many within their own institutions; Wall et al. (2005) provide examples of places to explore those prospects.

The DNP program at PUSON provides a curriculum from post baccalaureate to doctorate that emphasizes interdisciplinary collaboration among faculty, hospitals, community leaders, and state, national, and international health care administrators (Wall et al., 2005, p. 397). Collaboration with other disciplines in a variety of settings, including Ph.D. researchers, emphasizes an integrative approach to patient care and

provides opportunities for evidence-based practices in clinical care delivery, patient outcomes, and systems management (AACN, as cited in Wall et al., p. 397).

**Occupational therapy.** Another healthcare discipline contemplating the transformation from a master's degree to a clinical doctorate as the entry-level degree is occupational therapy. As of January 1, 2007, the Accreditation Council for Occupational Therapy Education (ACOTE) granted accreditation only to post-baccalaureate programs (Griffiths & Padilla, 2006). The decision to offer a master's or Doctor of Occupational Therapy (OTD) is at the institutional level. In their 2006 study, Griffiths and Padilla provide linkage to the influences leading to this decision in occupational therapy and other healthcare disciplines such as pharmacy, nursing, and physical therapy.

The purpose of the study was to explore the decision-making status at institutions regarding the selection of an OTD as a viable part of their program. Debate has occurred within academic and practice circles about the relative value of the Doctor of Occupational Therapy over the master's degree (Griffiths & Padilla, 2006, p. 540) but there is no professional consensus on the value of the inflated degree. A multifaceted survey was conducted to identify factors being considered in the decision-making process at academic institutions regarding the inclusion of a Doctor of Occupational Therapy degree into the program. The survey packet sent to academic program directors of all institutions that offered entry-level occupational therapy programs in the United States was based on a similar study conducted regarding the entry-level Doctor of Physical Therapy (Domholdt, Stewart, Barr, & Melzer, 2002).

The results were the identification of several factors that both support and impede the decision for institutions to incorporate the OTD into the program, with the majority leaning toward supporting its inclusion of the OTD. The study did not reveal a clear

understanding of the perceptions of the academic program directors toward the idea of developing an OTD program. The perception of academic leaders on the value of the clinical doctorate as an entry-level degree is an important research opportunity in all of the disciplines faced with this decision.

The identification of these factors provides an historical record of the considerations that institutions can judge when deciding on the feasibility of a program that is transitioning from a baccalaureate to postbaccalaureate. This is transferable information across disciplines faced with a similar situation. The portion of this article that held the greatest value was the *history of clinical doctorates* (Griffiths & Padilla, 2006, p. 541). In this section, the authors looked to research from several healthcare disciplines and articulately conveyed commonalities between the professions related to the entry-level requirements. Explanation of the various academic degrees relevant to the discussions provided a solid foundation for a complex and nomadic situation.

**Physical therapy.** The University of Colorado Physical Therapy program took over seven years to transition from the master's degree in PT to the doctoral degree (Rapport et al., 2007). The researchers found:

While appreciating the external forces creating change, and the professional momentum within physical therapy to transition to a doctorate degree (i.e., the DPT), the faculty at the University of Colorado became committed to the redesign of overall program philosophy and curriculum as part of this change. (p. 66)

Parallel to the colloquy of the clinical doctorate has been dialogue about the increasing interest in developing a viable alternative to the research focused degrees of Doctor of Philosophy in several of the health disciplines (Wall et al., 2005). The clinical doctorate, also called the practicing doctorate, offers students a degree that centers on

evidence-based practice. Melnyk and Fineout-Overholt (as cited in Wall et al., p. 397) defined evidence-based practice as:

a problem solving approach to clinical practice that integrates 1) A systematic search for and critical appraisal of the most relevant evidence to answer a burning clinical question; 2) One's own clinical expertise; and 3) Patient preferences and values. (p. 397)

Scholars have reported that it can take up to 20 years before scientific findings become part of bedside practice (Wall et al, 2005). Clinical doctorate programs that focus on interdisciplinary, evidence-based learning attempt to take "transitional knowledge" (Wall et al., p. 397) from research centers to practicing providers and may significantly reduce that timeframe.

This concept of interdisciplinary collaboration also is a central theme in the case study reported by Rapport et al. (2007). This report directed attention to a new Doctor of Physical Therapy program (DPT) at the University of Colorado at Denver and Health Science Center (UCDHSC). By summarizing the process used in the transition from a master's degree program to the DPT degree program at UCDHSC, the authors highlighted the curricular changes that have taken place in most physical therapy education programs as they have made this transformation. One of the most significant changes has been to provide opportunities for interdisciplinary collaboration. The ability to collaborate and interact on an effective team includes an underlying assumption that the members have a knowledge base regarding each other's disciplines, preparation, and expertise so that they can contribute to the efforts of the team (Utley & Rapport, as cited in Rapport et al., 2007, p. 63).

The transition to the clinical doctorate in health professions has prompted debate



about its impact on the availability and quality of health care, especially in populations that are underserved (King, Freburger, & Slifkin, 2010). Supporters of the change claim that it is necessary because of the complexity of health care and that the additional training will meet the demands of this complexity. Opponents argue that the added costs to students may eventually lead to decreases in practitioner supply. King et al. (2010) shed some light on the future delivery of services by exploring how the Doctor of Physical Therapy (DPT) is affecting the PT workforce and the allocation of services.

The purpose of this study was to observe how the shift to the clinical doctorate is affecting rural communities and to identify issues for future research (King et al., 2010, p. 25). The exploratory analysis of key stakeholder perspectives on the relationship between the DPT and the supply and quality of physical therapist was approached via a semi-structured telephone interview. The interviews with three key stakeholder groups--physical therapist education program directors, directors of PT departments at rural hospitals, and presidents of state PT associations--provide quantitative and qualitative data related to the impact on the supply and quality of physical therapy in rural areas so to date.

The results indicate that the stakeholders interviewed perceived the current PT shortage in rural communities has not been impacted as a result of the DPT growth (King et al., 2010). Overall, the opinions were diverse, at times conflicting, and indicative of future investigation into the impact of the DPT on rural communities. Study limitations include the small, purposive sample of stakeholders and the problem that the operational construct of “quality of care” (p. 33) was not clearly defined in the related questions. An interesting outcome is that several of the findings suggest opportunities for collaboration between the educational institutions and the rural hospitals. Some of the disparities

between perceptions of the program directors and the hospital administrators show a need for improved communication. In addition, there may be a mutually beneficial alliance between the educational programs and the rural hospitals. The DPT programs need sites to provide the students with clinical experiences, and the rural hospitals need help. Relationships with educational programs may assist the rural hospitals with recruitment and exposure to the latest evidence in practice (p. 33).

A commonality discovered in the three independent and diverse studies reviewed in this section is collaboration (King et al., 2010; Rapport et al., 2007; Wall et al., 2005). The studies approach the concept of collaboration as it relates to different disciplines, various scenarios, and numerous groups. The two case studies related to curriculum design (Rapport et al., 2007; Wall et al., 2005) provide program developers with models that can be used as examples. The content of the curriculum will be unique to a specific discipline, but the context of a health professions training program is similar in many ways.

### **The Current Study**

This qualitative study is an attempt to understand the perceptions of professional leaders and policy makers regarding the Pharm.D. as the entry-level degree to practice. The limited published empirical studies provide little information on the challenges and barriers that were faced during the transition to the clinical doctorate. The purpose of this study is to evaluate retrospectively the benefits of transitioning to the clinical doctorate level, the risks that accompany the new requirements, and alternatives that were considered to satisfy the philosophy and mission of the pharmacy profession.

### **Guiding Theory**

The theoretical framework for this qualitative study is grounded in the

Transtheoretical Model (TTM) of health behavior change. The decisional balance construct of TTM provides a structure for understanding the decision-making process at the individual, interpersonal, group, organizational, and community levels. TTM divides the process of change through a progression of stages: pre-contemplation; motivation and intention; change behavior; and, finally, maintenance.

In 1999 the Quality of Health Care in America Committee of the IOM published a report that addressed the issues of the decentralized and fragmented nature of the U.S. healthcare system, specifically the nation's epidemic of medical errors (IOM, 1999). The IOM (1999) concluded that faulty systems, procedures, or situations that lead individuals to make mistakes cause the majority of medical errors. The report laid out a roadmap by which government, health care providers, industry, and consumers can work together to design a safer healthcare system.

Selected milestone decisions in pharmacy, such as transforming the philosophical mission to pharmaceutical care and altering the entry-level requirements to the Doctor of Pharmacy, constitute important steps in the complex change process that has transformed the pharmacy profession. Changing the professional philosophy does not guarantee that all stakeholders, such as the healthcare delivery system, governing bodies, or the public, will embrace the necessary changes to transform the practice of pharmacy to match the philosophy. The Institute of Medicine (IOM) (2001) stated that due to the rapid changes occurring in the U.S. healthcare delivery system, a gap is evident in its ability to translate new knowledge and skills of practitioners into the best practice model. The IOM (2001) also noted that the health care needs of society have changed and bringing "state-of-the-art care to all Americans in every community will require a fundamental, sweeping design of the entire health care system" (p. 2).

The educational system must be remodeled and enhanced to prepare the Doctor of Pharmacy for the advanced knowledge, skills, and abilities necessary to fulfill the new role and responsibilities associated with the new practice model. The importance of adequately preparing the workforce to make a smooth transition into a newly designed healthcare system is paramount. The way health professionals are trained to meet the health care needs of society will need to be overhauled (IOM, 2001).

In addition, successful transformation of pharmacy practice will require that other health disciplines such as medicine and nursing must accept that the Pharm.D. provides assurance that graduates are prepared for the expanded roles and responsibilities associated with direct patient care. The expanded role of the pharmacist in patient care will require changing the structure and processes of the environment in which health professionals and organizations function (IOM, 2001).

### **Relation to Recent Empirical Work**

This study is a retrospective investigation on how the one decision, to change the entry-level degree in pharmacy, in a multifaceted change process, affected the other ingredients necessary to make the transformation successful. At the core of the pharmacy-degree changeover are the leaders and stakeholders, including but not limited to, professional organizations, employers, and educational leaders within and outside of the professions, accreditation agencies, and society who debated, advocated, publicized, and voted for or against the monumental decision to change the requirements for the entry into the pharmacy profession (Boydeen, 2006). In order to understand their perspectives, key participants were interviewed. Members of the AACP Commission to Implement Change, The Janus Commission, the AACP Board of Directors, and the AACP House of Delegates were chosen for their important participation in the decision-

making process. Their hindsight provides a unique perspective of the benefits, risks, and alternatives that were contemplated during the establishment and implementation of the Pharm.D. mandate. In addition, their longevity in the pharmacy profession gives them a perspective on the transferability of the Pharm.D. for extended professional opportunities.

This study of perceptions of the influences, desires, and politics behind the decision-making process--as well as the influence this decision has had on healthcare education, delivery of services, and society as a whole--will serve pharmacy education, offer knowledge and guidance to other health professions contemplating the transition to the clinical doctorate, and contribute to the existing literature. This study builds on and will advance the field with respect to the limited number of empirical investigations in the process of elevating required entry to the doctorate in healthcare fields. Specifically, although much has been published, very little has been based on empirical evidence. The current study helps to rectify that deficit.

### **Summary**

This study is an exploration into the perceptions of pharmacy leaders have about the Pharm.D. and its effect on health professions education, the delivery of services, the interdisciplinary relationship of health care providers, and the relationship between the degree and increased professional opportunities. This qualitative study was designed to examine these issues at the individual, interpersonal, group, organizational, and community levels through semi-structured interviews. The review of the literature centers on research and policy in relation to clinical doctorates in health professions, primary physical therapy, occupational therapy, nurse practitioner, and pharmacy disciplines.

Health professions encompass a plethora of careers that are involved, directly or indirectly, with patient care. Each health profession is unique in its governing structure,

educational requirements, regulatory processes, and educational institutional options. The current and future trends in health professions education and workforce provide insight into the state of our rapidly changing health care system. The future workforce is dependent on the academic training of the professional.

Academic accreditation is a complex system that is the primary method of quality assurance for educational institutions and programs. The private, non-government, self-regulated accreditation industry has been the standard for over 50 years. As the primary means of quality assurance in higher education, accreditation serves as a gatekeeper to federal and state funding and promotes accountability to the larger public. Over the past two decades, the climate of higher education is changing, and accreditation has become the target for any public discord and the buffer for friction between institutions maintaining autonomy and the increased demands for accountability and government regulation.

Professional associations play an important role in endorsing professionalism of the highest integrity, advocating for individuals in the profession, and protecting the public interest by regulating the members. These associations fundamentally operate as service organizations for their customers, referred to as members. The involvement and participation of the members is reflective of their commitment to the organization.

The academic degree required for a professional to enter the workforce has become a much debated issue among higher education leaders, government officials, and business executives. Efforts to increase higher education attainment rates in the United States have opened up dialogue regarding the definition and transparent learning outcomes that are associated with paper credentials. The reliance of society on paper credentials is complex because there is no single system exists to interpret their

significance.

In health professions, there is a rapidly precipitating movement is seen toward establishing the clinical doctorate as the entry-level degree into practice. Many health professions are somewhere in the progression of transitioning to the clinical doctorate as the first degree, but there is minimal theoretical or empirical information is available on the effects of this evolving situation. Looking at the experiences of health professions that have successfully made the transition to the clinical doctorate may be helpful to other professions contemplating the transition. The factors identified in the decision-making process in occupational therapy or pharmacy may serve as a template for other professions that are moving through the same decision-making process. The transition from a baccalaureate program to a post-baccalaureate program in any discipline may warrant different content, but the dynamics of the change process are likely to be parallel.

## CHAPTER III

### METHODOLOGY

#### **Introduction**

A shortage exists in academic literature related to the benefits, risks, and alternatives to the clinical doctorate as the entry-level degree in health professions education. Studies on the transition to the clinical doctorate in individual disciplines, although limited, emphasize the importance of understanding the complexity of the change process. LaBelle (2004) indicated that the master's degree is being replaced by the professional doctorate for entry into practice, especially in healthcare. Ellis (2007) stated that the transition to the clinical doctorate as the entry-level degree in health professions is a "product of its time," (p. 2274) insufficient theoretical or empirical data is found on the effects of this evolving situation. Swanchak (2010) suggested that the advanced knowledge and skills necessary to be effective in the rapidly changing and complex healthcare system require expanded education for all health professionals. Collier (2008) recognized that there are various stakeholders involved in this debate: professional organizations, employers, and educational leaders within and outside of the professions, accreditation agencies, and society as a whole.

This chapter provides a description of the research methods used in this study, including the research design, description of the population and sample, instrumentation, procedures for data collection and analysis, as well as the issues of validity and ethics. Using the Transtheoretical Model of Health Behavior Change and a qualitative method, the overall research question that guides the study was, "What are the current perceptions (benefits, risks, and alternatives) of key policy makers in the pharmacy profession who



participated in the decision to require (by January 1, 2003) the clinical doctorate (Pharm.D.) as the entry-level degree for practitioners?”

### **Research Design**

The purpose of this study is to gain understanding of the perceptions of the decision makers who were involved in the changes that led to the practicing doctorate as an entry-level degree for pharmacy. For this research, a qualitative case study will be conducted on the establishment and implementation of the entry-level doctorate in the pharmacy profession. Qualitative design allows inquiry on the detailed knowledge of the processes by which the series of events took shape and how these processes affect stakeholders (Weiss, 1998). The evaluation involves an oral account of individuals who were instrumental in the decision-making process through semi-structured interviews.

The role of the researcher in qualitative research is one of a spectator of an occurrence. Observing the emic (the participant’s view), while maintaining the outsider viewpoint (etic perspective), the researcher is able to record the data as well as consolidate and organize the findings (Danquah & Miller, 2007; Gall et al., 1996). Stake (1978) stated:

What is happening and deemed important within those boundaries (the emic) is considered vital and usually determines what the study is about, as contrasted with other kinds of studies where hypotheses or issues previously targeted by the investigators (the etic) usually determine the content of the study. (p. 7)

“Qualitative data analysis requires understanding, digesting, synthesizing, conceptualizing, and reconceptualizing the description of feelings, behaviors, experiences, and ideas” (Macnee & McCabe, 2008, p. 28). This retrospective perspective on the experiences, observations, and opinions of key participants in the transformational

entry-level degree changeover in pharmacy is most reliably collected and best analyzed through qualitative case study methods.

For this study specifically, using a qualitative research design to collect demographic data and interviews of 14 key individuals from four specific groups allowed the researcher to collect thoughts, beliefs, and reflections in relation to the decision-making process. Creswell (1998) offered several characteristics of qualitative methodology procedures that serve this retrospective study: it is interactive and humanistic, building rapport and credibility with the interviewees, and it is emergent and multi-faceted. Taking a holistic, panoramic perspective approach to this investigation results in lessons learned and the identification of remaining questions (Creswell, 2003).

### **Case Study Methods**

Case studies as a research method offer insights that may not be achieved with other qualitative approaches. Yin (2009) suggested that the case study method be chosen when the research questions start with “who” or “why,” the researcher has little control over the variables, and it is necessary to focus on a contemporary event. According to Yin: A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. (p. 18) Case studies are carried out so that one can gain further understanding and certain audiences will benefit (Stake, 1978). Stake believes that “its best use appears to me to be for adding to existing experience and humanistic understanding” (p. 7).

The unit of analysis, or the basis for the case, is crucial. Case selection is determined by the research purpose, questions, and theoretical content; but other constraints can have an impact on case selection (Rowley, 2002). External constraints

such as accessibility, resources, and time available will influence the unit of analysis.

According to Stake (1995), the type of case study depends upon the purpose of the inquiry. An instrumental case study is used to provide insight into an issue, an intrinsic case study is undertaken to gain a deeper understanding of the case, and the collective case study is the study of a number of cases in order to inquire about a particular phenomenon. As discussed in Chapter I, the topic of the Pharm.D. as the entry-level degree for the practice of pharmacy was first initiated in 1948. Changing the degree requirements for pharmacy practice was a topic of conversation for a variety of stakeholders at multiple organization levels for over 40 years. To investigate this phenomenon from the initiation of the conversation to the decision, and finally the implementation, was too vast for this study. Based on the purpose of this research, the research questions, and the theoretical content, the researcher established boundaries to narrow the unit of analysis of the case. The four limited, but critical, stakeholder groups and the timeframe produced explicit bounds for this instrumental case study, 1989-2002, wherein, the case represents a vehicle for understanding a complex issue.

Case study research constitutes both quantitative and qualitative sources, typically triangulating data sources such as direct detailed observations, interviews, and document analysis. Triangulation comprises evidence from various sources to collaborate the data or finding (Rowley, 2002). The primary method of data collection for this bounded case study consisted of semi-structured interviews. A document analysis was conducted prior to the interviews to provide the researcher had a clearer understanding of how each subject fit into the decision-making framework when the full interview was conducted. The data analysis and the semi-structured interviews were conducted to strengthen the data by providing a triangulated design.

### **Role of the Researcher**

In the qualitative case study framework chosen for this study, the researcher is the primary instrument of data collection, interpretation, and analysis. The role of the researcher in case study research follows that of a non-participant observer (Creswell, 2003; Yin, 2009). In the non-participant role, the researcher attempts to remain objective and sustains some level of distance, while at the same time cultivating interpersonal rapport in the relationship with subjects in order to elicit rich, optimal data.

Yin (2009) suggested that the researcher must be able to ask good questions and interpret the responses, be a good listener, be adaptive and flexible in various situations, have a firm grip on issues being studied, and be unbiased by pre-conceived notions. In developing the interpersonal rapport and relationship with the participants, the researcher's biography is implicated in the production of knowledge, allowing for subjective influences incorporated in the data (Hughes, 2012). Coffey (as cited in Hughes, 2012) suggested the researchers should be conscious of how case study research and narrative writing "reproduce and implicate selves, relationships, and personal identities" (part 2, para. 6).

Reflexivity is acknowledgement of ways in which the researcher's biography influences the data collection findings. Throughout the process, the researcher needs to be aware of personal biases that can be derived from social characteristics, previous personal and professional experiences, or education and interests that could influence the data (Malterud, 2001, pp. 483-484).

In this study, the researcher acknowledges possible biases that could have influence in the interpretation of the interview responses. First, the researcher holds a Doctor of Chiropractic (D.C.) degree. This clinical doctorate is the entry-level degree to

the practice of chiropractic. The chiropractic profession established the D.C. degree as the entry-level into practice from the inception of the profession in 1895, unlike pharmacy that is transitioning from a master's degree to a doctorate degree as the entry-level degree many years after the beginning of the profession.

Second, the researcher has responsibilities in chiropractic education and the health care delivery system. These experiences provide knowledge in the issues and concerns in health professions education and the U.S. healthcare system from a chiropractic point of view.

Third, the researcher made a professional career change after 20 years in private practice in chiropractic to a career in academics, specifically in health professions. In this professional transition, the researcher experienced limitations in professional opportunities that were specifically related to the Doctor of Chiropractic degree being a first professional degree, as compared to a terminal degree in a profession as defined in academic nomenclature.

Finally, the reviewed literature, particularly the opinions and commentary, was heavily weighted toward the negative consequences of the transition to the Pharm.D., specifically the hardships on the academic institutions, and the phenomenon of degree creep. The researcher is unaware of any empirical data that address the influence the Pharm.D. has had on health professions education, delivery of service, interdisciplinary practice, or society as a whole.

### **Population and Sample**

Patton (2002) suggested that qualitative investigations typically focus on relatively small samples to permit inquiry and explanation of a situation in depth (p. 46). Purposeful sampling of a small group of individuals may provide a wealth of information

that pertaining directly to the questions being studied (Patton, 2002). Critical sampling permits the selection of subjects that allow for logical generalization and relevancy to other cases. The population constituted those individuals who were members of/participated in four domains: AACP Commission to Implement Change in Pharmacy Education, the Janus Commission, the AACP Board of Directors and AACP House of Delegates from 1989-2002, and the Accreditation Counsel for Pharmacy Education (ACPE) board of directors form 1989 - 2002.

The American Association of Colleges of Pharmacy (AACP) is a national organization representing the interests of pharmacy education and educators (About AACP, 2012). The membership includes all accredited colleges and schools, individual faculty, students, and organizations directly connected to pharmacy education. The board of directors is a body of appointed members who oversee the activities of the AACP and act on behalf of, and is subordinate to, the AACP's full assembly.

The Commission to Implement Change in Pharmaceutical Education was created as part of ACCP's strategic plan for educational change to foster assurance that the pharmacy profession was positioned to be a vital and unique force in health sciences as they moved into the 21st century (Buerki, 1999). AACP President William Miller appointed the commission, charging it with developing a long-term strategic plan that the ACPE, the Association, and its members could implement over the next decade. Miller (1989) outlined specific responsibilities of the commission, including: articulate a mission of pharmacy practice, grounded in philosophy and theory of pharmaceutical practice, that would serve as the framework for pharmacy education; provide recommendation regarding the types of manpower necessary to fulfill the mission; define the values and needs of employers of pharmacy graduates; determine the parameters of

an entry-level pharmacy practice degree; establish a timeline of the process of pharmacy education; suggest changes in accreditation standards to the ACPE; and prepare a timetable for implementing any major changes (Buerki, 1999, p.181). The commission was instructed to develop an implementation plan that was based on previous studies and current environment factors affecting pharmacy practice and education.

The Janus Commission was formed in 1996 to assist the Commission to Implement Change and the AACP Board of Directors with identifying healthcare environmental factors, both historically and futuristically, that were potential threats and opportunities for the pharmacy profession. This “think tank” was charged with scrutinizing the landscape of pharmacy and analyzing changes in the healthcare system that may influence practice, education, and research (Buerki, 1999). The Janus Commission (1997) defined the environment as:

Encompassing the health care delivery system, health professions education, the academic health center and research enterprise, and its related social, economic, and political forces that impact these three areas. (p. 2)

The Commission convened throughout 1996 and 1997 and submitted a report summarizing the issues discussed at the meetings and offering a series of recommendations for consideration by the AACP board of Directors.

Two months after the AACP established the Commission to Implement Change in Pharmacy Education, the Accreditation Council on Pharmacy Education (ACPE) declared its intention to “propose revisions in accreditation standards in keeping with changes in pharmacy practice and pharmaceutical education” (Buerki, 1999, p. 181). ACPE is the national agency for the accreditation of professional degree programs and continuing education in pharmacy. The board of directors is derived from the AACP, the

American Pharmacists Association (AphA), the National Association of Boards of Pharmacy (NABP), and the American Council on Education (ACE) (ACPE, 2012). The ACPE concluded:

Based upon the Council's analysis and study of current practice developments, future practice developments, future practice challenges and the corresponding educational preparedness needed, the Council foresee the time when the accreditation standards will focus upon a doctor of pharmacy program as the only professional degree program evaluated and accredited. This new direction may become adopted as soon as the year 2000. (Nona, 1990, p. 203)

The sample consists of key individuals from various stakeholder groups that constituted the four realms involved in the decision-making process such as members of the accreditation agency, representatives of the profession, agents from the professional advocacy domain, delegates from the educational field, and individuals from the general public who were involved during this period. These individuals formed the philosophical leadership necessary to change the profession (Janus Commission, 1997).

Guba and Lincoln (as cited in Weiss, 1998) suggested that the criteria should allow for selection that represents maximum variation to ensure the broadest scope of information is collected. The selected sampling strategy allowed for a straightforward and accurate assembly and analysis of data. For this study, a purposeful, critical case sampling of key individuals involved in the decision-making process of the changeover to the entry-level professional degree are studied. The investigation into a phenomenon that occurred over 20 years ago is limited because some individuals are unavailable (i.e., death, ill-health, retirement, etc.). The final sample size netted 14 high quality interviews. Availability and willingness of participants determined the final set of interviews. The



researcher originally contacted 43 individuals from the four target policy groups. The 14 of 43 represent a 33% agreement to participate for the critical case sampling procedure.

### **Research Questions**

The research questions guiding this study were introduced in Chapter I and are included in this section for convenience of the reader. These guided the construction of the Interview Schedule (Appendix A).

1. What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:
  - a. Health professions education?
  - b. Delivery of services?
  - c. Interdisciplinary relationship of practicing clinicians?
  - d. Societal and economic landscape of the health care industry? (Cost-benefit)
2. What is the transferability of an entry-level clinical doctorate related to professional opportunities?

### **Instrument Development**

Qualitative research design includes four primary methods of acquiring data: interviews, surveys, observations, and review of documents pertinent to what is being studied. In this research, the curriculum vita of the subjects was utilized to provide historical information and demographics of the individuals that participated in the decision-making process. Review of these documents provided objective information (see Appendix B, Document Analysis Protocol), but the ability to seek in-depth meaning to thoughts and feelings of the participants is limited. The interview process allows for more in-depth query into the subjective responses of the participants and the ability to

illuminate the responses given.

An interview schedule was developed based on relevance to the research questions, the specific role group, literature in the field, and theoretical considerations. Specifically, questions were developed as a method to assess individuals' perceptions regarding the benefits, risks, and alternatives on health professions education, delivery of services, interdisciplinary relationship of practicing clinicians, and the societal and economic landscape of the health care industry. In addition, the interview schedule assessed the individuals' perceptions of the transferability of the entry-level clinical doctorate related to professional opportunities (Appendix C). The interview schedule consists of 27 open-ended questions.

The process by which the researcher developed this study served as a frame of operation and included all the necessary elements in the conduct of case study research. Stake (1995) proposed a series of necessary steps for completing a case study in order to increase the reliability of the research, including posing research questions, gathering data, data analysis, and interpretation. The researcher developed a purpose and rationale for the case study, established the significance of the phenomenon of interest, and developed specific research questions and the unit of analysis.

The researcher's dissertation chair provided initial feedback on the content of the specific research questions. Subsequently, the other members of the dissertation committee gave feedback. Finally, the author's chair provided one last round of input; those revisions were submitted with the IRB human subjects application.

### **Expert Review of Research Instrument**

Burns and Grove (2005) suggested that, to ensure validity, individuals with expertise should examine interview questions for appropriateness, accuracy, and

suitability. Following approval from the Institutional Review Board at Western Kentucky University, a review of the instrument for appropriateness, accuracy, and suitability was conducted. A content expert reviewed the interview schedule to ensure construct validity of the survey. No changes were made as a result (Appendix C). A qualitative expert provided feedback on the interview schedule to enhance expert validity, and no changes were made as a result. Collectively, these individuals possess expertise in healthcare education, pharmacy, and qualitative research methods.

Each of the members of the Expert Panel were sent a letter briefly explaining the study and requesting review and comments. The instrument draft and a review form with specific questions were included (Appendix D). The content expert familiar with the transition to the clinical doctorate in the health professions is Dr. Mary Lavin from St. Louis University School of Nursing. The qualitative research methods expert is Dr. Judy Davison from Western Kentucky University. (At a later date, subsequent to serving as a qualitative research methods expert, Judy Davison was added as a member of the dissertation committee.) Their combined expertise offers a complete study of the instrument for the research, providing support for content validity.

By identifying any deficiencies in design or procedure problems, alterations can be addressed before the larger study (Patton, 2002). In lieu of a pilot study, a review of the final interview schedule was conducted utilizing the content expert from the St. Louis University Doctor of Nurse Practitioner program, Dr. Mary Lavin. She provided feedback regarding the instrument and a baseline for the length of time for the scheduled interviews was obtained. She noted that the questions were specific to individuals who were involved in the decision-making process and estimated that the interviews would require 50-55 minutes to complete. No additional changes were made to the interview

schedule following this final review.

### **Procedures**

In general, procedures were consistent with a case study approach. For this investigation, semi-structured interviews were the primary method. Creswell (1998) suggested that recording devices should be used to capture and transcribe all of the comments in the interview process. Additionally, note taking by the interviewer provided a back up for technical difficulties and also provided information on the overall content, emotions, body language, and voice inflection that can help to interpret the actual transcript. Burns and Grove (2005) advised the interviewer to establish an environment comparable to that of a comfortable conversation. The researcher should adhere to the questions, be respectful of the time involved, be courteous to the participants, and avoid offering advice or asking questions that are not pertinent to the study (Creswell, 1998).

The investigator collected data utilizing the following procedures. An interview schedule was developed and mapped to the research questions. An introduction letter (Appendix E) was sent via electronic mail to the 43 individuals identified in the population/sample section provided contact information. Respondents who agreed to participate were sent the formal consent form (Appendix F). Individuals were requested to return the informed consent form, along with their curriculum vitae. Once the consent form and CV were obtained, the date/time of the interview was scheduled. Those who did not respond to the initial email within seven working days were sent a second email requesting their participation. In addition, the introductory letter and the consent form were sent via postal service. The respondents who returned a signed consent form were contacted via email or telephone to schedule the interview. They also were asked to provide the researcher a CV prior to the interview date.

Two individuals responded to the initial email and declined to participate. The researcher sent an email thanking them for their response, expressing how valuable their input would be to the study, and offering contact information in case they changed their mind. Both individuals changed their mind and accepted the invitation to participate.

Each participant in this study was required to sign an informed consent form. According to Gall et al. (1996), the researcher is required to inform each participant of the details of the study, the opportunity to withdraw consent without penalty, approval for recording the interview, and notification if other individuals will have access to the data.

Fourteen interviews were conducted. These represent the collective retrospective set of perceptions, reflections, and opinions of the selected participants. These individuals were chosen due to roles they played or their professional positions at the time of the pharmacy degree changeover. The dates of the interviews ranged from May 16, 2012 to June 15, 2012. All participants requested a telephone interview. The interview appointment was scheduled for approximately one hour, in which the researcher and the subject would be able to talk uninterrupted and where responses to the interview questions could be recorded.

The curriculum vitae provided background information to enhance the quality of the interview (see Appendix B for data gleaned from the CVs). A reminder email was sent two days prior to the scheduled interview for confirmation of date, time, and contact number. The telephone interviews were recorded through Clear Captions, a telephone captioning service for qualified Mac/PC/mobile users. Stacy Swenck transcribed the recorded interviews, and a transcript was sent to the researcher for review, editing, and adoption. The researcher also took contemporaneous, hand-written notes as back up in case of technical failure in the recording process. As indicated in the participant letter, the

individuals were ensured confidentiality prior to beginning.

### **Data Analysis**

The data analysis process took steps to offer a description of the uniqueness of this scenario. The specific analytic techniques utilized are consistent with the literature on qualitative methods generally (e.g., Patton, 2002), as well as studies that parallel the current investigation with respect to examination of key informants from a restricted population (e.g., Boydeen, 2006; Thomas, 2010). The process of qualitative data analysis is dynamic, beginning during data collection (Merriam, 2002). As the researcher examined notes and transcripts collected, interview excerpts were sorted and coded into categories that demonstrate trends or commonalities among the excerpts. Integration of the excerpts allows the researcher to develop a clear story of the specific case.

The two primary data sources for this study were (a) individual curriculum vitae and (b) transcripts from the interviews with the four stakeholder groups. A Document Analysis Protocol (Appendix B) was developed to facilitate the examination of the CV obtained from each subject. An analysis of the interviews provided detailed descriptions of the individual perceptions that were present within the larger narrative. The first step in analysis is a holistic reading of the transcripts. After determining a sense of the overall landscape of the data, the interviews were coded into categories.

Yin (2009) suggested that every case study should include an analytic system that guides the decision regarding what will be analyzed and for what reason. In this case study, the researcher utilized techniques from grounded theory in the search for any commonalities and patterns inherent in these common excerpts. During the first reading of the transcripts, the researcher wrote reflective remarks within brackets that were directly entered into the interview transcripts. This placed the researcher's perceptions

and thoughts into a visible form to allow for a deeper and more general sense of what is happening.

The second reading of the transcripts focused on open coding (Creswell, 1998) to identify and categorize general categories that are repeated in the transcripts. The researcher color-coded the data, and the development of these categories and subcategories emerged as themes, patterns, and commonalities.

During the third immersion into the transcripts, the researcher utilized axial coding (Creswell, 1998) to document patterns that coincide within the data collected from the semi-structured interviews. A map of how the interview schedule related to the research questions is attached as Appendix A. The transcripts were independently analyzed and recorded on a matrix that was framed by the interview schedule as it related to the research questions. For example, five interview questions are on the interview schedule related to Research Question 1, section a. The interview transcripts were analyzed across these five questions collectively. Five questions on the interview schedule related to Research Question 1, section b. The transcripts were analyzed across these five interview questions collectively. This was repeated for Research Question 1, section c; Research Question 1, section d; and Research Question 2.

For triangulation purposes, two types of data--the individual curriculum vitae of the subjects and the 14 interviews (from the four stakeholder domains)--provided data that reflected different windows into the perceptions of key individuals regarding the benefits, risks, and alternatives to the Pharm.D. as the entry-level degree into pharmacy practice.

### **Trustworthiness and Validity**

The literature that was reviewed made it clear that the effects of the entry-level

Pharm.D. degree changeover had yet to be fully captured and analyzed. Each person identified as a leading participant was interviewed to inform this investigation. The combined knowledge gathered via a review of the literature, document analysis, and detailed parsing of the interview provides the study with a high level of credibility, authority, and validity. Merriam (2002) noted that issues of internal validity, reliability, and generalizability constitute the trustworthiness of a study. In qualitative design, errors that affect trustworthiness can occur with either data collection or analysis. It is important that the research be rigorous in utilizing a scripted protocol for data collection and a defined method of analysis to ensure reliability and validity. Both of these were clearly articulated and followed in this study. Merriam (2002) identified eight strategies for promoting validity and reliability: (a) triangulation, (b) member checks, (c) peer review/examination, (d) researcher's position or reflexivity, (e) adequate engagement in data collection, (f) maximum variation, (g) audit trail, and (h) rich, thick descriptions.

Triangulation was utilized by collecting background information from the CV of the participants and confirming that the information collected during the interview was indicative of the thoughts and feelings of the participant. The two qualitative methods were combined to provide a more complete set of findings than could be gleaned through the administration of one of the methods alone.

A review of the process and interpretation of data was completed by Dr. Stephen Miller, the researcher's dissertation chair, in effect serving as an informal external peer review/examination (audit). This process of evaluation involving a qualified individual within the relevant field improves quality, upholds standards, and increases the trustworthiness and validity of the findings.

Regarding reflexivity, the researcher was attentive to her relationship to the study



(a healthcare professional with a background in chiropractic) with regard to adversely affecting the results. An effort was made throughout to maintain a critical self-reflection of biases.

As the primary instrument for data collection, the researcher was intensively engaged in both data collection and data analysis. The focus on saturation with the content of the interviews facilitated the search for common themes and concomitant attention to outliers or lack of similarities. This prolonged involvement and familiarity with the case is crucial for validity and reliability.

In order to ensure maximum variation of perspectives, the full range of participants from the four target policy groups (population) was included. The office of the Executive Secretary of the AACCP identified the population base from the AACCP Board of Directors, Janus Commission members, and the Commission to Implement Change members. The Executive Staff at the ACPE identified the ACPE Board of Director members. From this larger group a census was conducted among those still available. The return rate on the census (33%) ensured the researcher of a representative cross sample. Specifically, maximum variation was assured by selecting a critical purposeful sample of key individuals.

An audit trail was maintained by providing a detailed accounting of the research methods and procedures used in tracking the responses to items from the interview schedule and research questions. Steps were taken from the start of the research project to present a transparent description of the development and reporting of the findings.

The data collection procedure used was limited to personal interviews. Inaccessibility to certain key participants could have resulted in an unavoidable limit to the richness and scope of the study, but results of the high quality interviews will allow

the reader to decide whether the findings are transferable to other disciplines transitioning to the clinical doctorate as the entry-level degree.

In summary, the researcher addressed seven of Merriam's (2002) eight strategies to ensure credibility and trustworthiness of her analysis--triangulation; peer review/examination; researcher's reflexivity; adequate engagement in data collection; maximum variation; audit trail; and rich, thick descriptions. Triangulation was satisfied by the use of more than one approach to the investigation in order to enhance confidence in the ensuing findings. Subjecting the author's research to peer review/examination ensured a higher level of trustworthiness and validity to the findings. The researcher's reflexivity permitted the understanding of how knowledge, beliefs, and values may have come into play during the research process. As the primary research instrument, the researcher maintained adequate involvement in the data collection process. Attention was given to maximum variation sampling to ensure the broadest range of information and perspectives available. An audit trail of the research steps taken during the investigation is documented in a transparent report. The researcher provided thick, rich descriptions to allow the readers to determine if the situation described in the study applies to the reader's situation.

### **Ethical Considerations**

The researcher was diligent in her efforts to guarantee that all aspects of this research study met the standards for ethical research, including the federal rules for studies involving human subjects. The Human Subjects Review Board (HSRB) from Western Kentucky University required completion of an on-line certification course in human subject research. Both the researcher and dissertation chair, as required, completed this training. To ensure Protection of Human Subjects, application was made

to the Western Kentucky University Institutional Review Board for approval to conduct the study. Every effort was taken to follow all procedures regarding protection of confidentiality and respect for persons (consent process). All data were handled and stored in accordance with recommendations by Wiebe, Eurepos, and Mills (2010).

### **Summary**

This chapter recognizes the methodological concerns involved in the investigation into the benefits, risks, and alternatives to the Pharm.D. as the entry-level degree into pharmacy practice. The purpose of this case study is to gain insight and knowledge that fills a gap in the current theoretical or empirical data on the effects of this transition. Description of the research methods used in this study, including the research design, description of the population and sample, instrumentation, procedures for data collection and analysis, as well as issues of validity and ethics constitute this chapter.

The research design was a qualitative case study that allowed for inquiry into the detailed knowledge of the transition to the Pharm.D. as the entry-level degree into pharmacy practice and the perceptions from key individuals on how this decision affected stakeholders. Triangulation was achieved by examining two sources of data with two different procedures. Background and demographic information on the participants was collected via each individual's CV via document analysis. The Interview Schedule was the primary source of information, focused on the emic perspective of the subjects using a semi-structured interview format.

In qualitative research, the researcher's role is central. In this study, the researcher took primary responsibility for the interpretation, based on analyses that were guided by the strategies of ground theory coding. Throughout, the author remained cognizant of her own background and biases - that of a healthcare professional from a somewhat

marginalized specialty, chiropractic - with respect to the traditional disciplines. That background is complemented by her current work in higher education and the methodological skills of the academic doctorate.

The thoughts, beliefs, and reflections of 14 key individuals from the four target policy groups constituted the primary data regarding the decision - making process to require the clinical doctorate in pharmacy. These individuals--including leaders of professional associations, educators, accrediting agencies, and professionals--were centrally involved in requiring the Pharm.D. as the entry-level degree to practice. Case-study strategy of inquiry guided the research design and data collection (Creswell, 2003; Yin, 2009), with the goal to obtain multiple perspectives from the four policy groups/commissions.

The population for this bounded case study consisted of 43 individuals who were participants in four stakeholder domains: AACCP Commission to Implement Change in Pharmacy Education, the Janus Commission, the AACCP Board of Directors and AACCP House of Delegates from 1989-2002, and the ACPE Board of Directors. A census of this purposeful, critical case population resulted in a final sample consisting of 14 key individuals (33% return) from the various stakeholder groups who constituted the four realms that were involved in the decision-making process.

The research questions were constructed following a survey of related studies. Specific questions were designed to elicit information on the retrospective perceptions of the stakeholders in the field of pharmacy who were involved in the decision to require a clinical doctorate (Pharm.D.) as the entry-level degree to practice as a professional. This involved modifying questions from previous studies to focus on this historical decision, as no investigations were found that examined the long-term effects of this milestone

decision in the healthcare professions.

Qualitative research design, protocols for case study research, and the Transtheoretical Model of Behavior Change provided frameworks for the development of the Document Analysis Protocol and the Interview Schedule. The document analysis provided objective information about the subjects (applied to the subjects' CVs). The interview schedule was developed to gain in-depth knowledge regarding the perceptions of the respondents on the effects of the Pharm.D. and the transferability of the entry-level clinical doctorate related to professional opportunities.

The research conducted in this study is consistent with the elements of case study research. The components of the study included the development of a purpose and rationale, establishment of the significance of the issue, the development of specific research questions, the unit of analysis (the bounded situation/decision as instrumental case), and protocols for data collection and data analysis.

The Institutional Review Board at Western Kentucky University approved the study; and the instruments were reviewed for appropriateness, accuracy, and suitability. Both a content expert and a qualitative expert both examined the interview schedule to ensure validity. No changes were made to the instrument based on the expert review.

The procedures for this study were consistent with case study research. The primary method of data collection was the semi-structured interviews, in which the questions were mapped to the research questions. The 43 individuals who constituted the population were sent an introduction letter via electronic mail in April 2012. Initially seven responded that they would be unable to participate, but two decided to participate after a follow-up letter was sent. Those who did not respond were sent the same introduction letter by U.S. Postal mail. Three letters were returned for invalid address.

Twenty-one individuals did not respond to any method of contact. This resulted in 14 subjects constituting the final sample.

All subjects completed an informed consent form and were asked to include a current CV when they returned the informed consent form. Telephone interviews were conducted May 16, 2012 - June 15, 2012 and were recorded, transcribed, reviewed for accuracy, and analyzed.

The data analysis process began during data collection. As the researcher received the completed transcriptions, review of the documents was started. The analytic system in this study included utilizing the document analysis protocol to retrieve objective information on the subjects as well as using open and axial coding methods to search the transcripts for commonalities and patterns that recurred in the interviews.

The collective knowledge gathered by review of the literature, document analysis, and in-depth study of the interviews provided the study with a high level of trustworthiness, reliability, and validity. The researcher worked diligently to ensure that this study met the standards of ethical research, including the protection of human subjects, confidentiality, and respect for persons.

## CHAPTER IV

### RESULTS

#### **Introduction**

The clinical doctorate is an emergent trend in health professions. In some disciplines, the practicing doctorate is an advanced degree that is available for experienced professionals. In other disciplines the clinical doctorate is the sole entry-level degree to practice. In many cases, this transition is precipitated by the educational accrediting agencies implementing a clinical doctorate as the entry-level degree into practice, surrounded by both support and skepticism among educators, professional organizations, practitioners, administrators, and third party payers.

The individual health professions have explained the rationale and requirements necessary for clinical doctorate programs leading to the respective degree, but there is little information available about how this movement will affect health professions education, delivery of service, interdisciplinary relationships among healthcare professionals, or society in general. Leaders and policy makers in health profession disciplines that are facing this transition should consider the benefits, risks, and alternatives to changing the educational requirements necessary to enter the profession. This study focuses on how the transition to the clinical doctorate as the entry-level degree in one profession, pharmacy, was perceived during the inception and implementation phase of the Doctor of Pharmacy.

The purpose of this study was to provide insight into the perceptions of

professional leaders and policy makers regarding the benefits, risks, and alternatives to the Doctor of Pharmacy degree as the entry-level degree into pharmacy. Pharmacy is appropriate for this study because the transition to the Doctor of Pharmacy (Pharm.D.) as the profession's entry-level degree was mandated in 1992, with complete implementation in 2003. Now, after 20 years, it may be insightful to see the effects of the change on the profession. All of the leaders and stakeholders in this study were pivotal in making decisions regarding the academic mandate to implement the Pharm.D. Each participant reflected on past experiences and articulated current perceptions related to the effects of the decision to go to the Pharm.D. as the sole degree into to pharmacy practice.

The remainder of this chapter details the results of this study. Specific sections addressed include methodological considerations and findings, which are organized according to the research questions. The chapter concludes with a summary.

### **Methodological Considerations**

This is a qualitative case study that involves an oral account of individuals who were instrumental in the decision-making process through semi-structured interviews. The researcher observed the participant's view (emic perspective), while maintaining an outsider viewpoint (etic perspective). The researcher established the unit of analysis by narrowing the population to four limited, but critical, stakeholder groups and the timeframe of 1989-2002, to represent a means to understand a complex case. The four stakeholder groups included members of the AACP Board of Directors, the Commission to Implement Change in Pharmacy Education, the Janus Commission, and the ACPE Board of Directors.

The population consisted of 43 key individuals from the four stakeholder groups that constituted the four realms involved in the decision-making process regarding the



Pharm.D. as the sole entry-level degree to practice pharmacy. Availability (deceased, ill, retired) and willingness of participants determined a final sample size of 14 high quality interviews. The 14 of 43 represent 33% participation for the critical case sampling. Of the 43, 28 were still available. The final sample involved 50% of those who could, at this point, have participated.

### **Instrumentation**

The curriculum vitas of the subjects in this study were reviewed for objective information and demographics of the individuals participating in the decision-making process (see Appendix B, Document Analysis Protocol). This is inconsistent with the consent form signed by each participant. The consent form states that a content questionnaire would be sent to all participants prior to the interview. In lieu of the content questionnaire, the CV represented objective information on each participant, a tackic taken based on the suggestion of one of the respondents. This post-hoc change was approved by the IRB.

The interview questions were developed as a means to assess the individuals' perceptions of the benefits, risks, and alternatives on health professions education, delivery of services, interdisciplinary relationship of practicing clinicians, and the societal and economic landscape of the healthcare industry. In addition, questions were created to assess the individuals' sense of the transferability of the entry-level clinical doctorate related to professional opportunities. The interview schedule consisted of 27 open-ended questions based on relevance to the research questions, the specific role group, literature in the field, and theoretical considerations. The dissertation committee also gave feedback on the development of the instrument. After preliminary drafting of the instrument was completed, the dissertation chair provided additional input.

## **Procedures**

The procedures for this research were consistent with a case study approach. After receiving approval from the Human Subjects Committee at Western Kentucky University, the research instrument and the Interview Schedule were examined for content and clarity by two educators, one in health professions education and one in qualitative research. The Expert Panel Members provided valuable feedback to the researcher. Each panel member completed the Expert Review of Interview Schedule (Appendix D). The expert panel members noted no significant changes. In lieu of a pilot study, the content expert and the author's dissertation chair reviewed the final interview schedule one last time.

Fourteen interviews were conducted, representing the collective retrospective set of perceptions, reflections, and opinions of the selected participants. All the interviews were conducted by telephone and were completed in approximately one hour. Once the conversations began, the subjects expressed great passion and enthusiasm to voice their views and opinions. Respondent 10 said, "Your proposal and thesis topic is really much needed. I think it is great." Because of the eagerness of the subjects to share information, several of the interviews exceeded the scheduled time, some lasting up to two hours in length. The intense curiosity was further demonstrated when a respondent contacted the researcher several months after the interviews, inquiring to as when the study would be published and requesting the opportunity to read the final product.

The interviews were recorded and transcribed. In addition, the researcher took contemporaneous hand-written notes as a backup in case of technical difficulties. Each interview began with the researcher confirming the confidentiality of the conversation, just as it was explained in the written participant letter.

## **Data Analysis**

Using a purposeful, critical sample matrix as detailed in Chapter III, two primary data sources were used for this study: the individual curriculum vitae and the transcripts from the interviews with the four stakeholder groups. A Document Analysis Protocol (Appendix B) was utilized to examine the CV of each subject for objective background information to enhance the quality of the interview. In this case study, techniques rooted in grounded theory were utilized to search for any commonalities and patterns in the interview transcripts (Creswell, 2003; Yin, 2009). The specific analytical techniques involved the researcher collecting notes and transcripts. The interview excerpts were sorted and coded into open codes (themes) that demonstrated trends. These open codes were collected into axial codes (patterns) that the researcher identified among the data. Integration of the trends and themes allowed the development of a holistic story of the specific case.

Each of the 14 participants' responses to the interview questions were read, reread, and analyzed for commonalities and themes that were presented in the transcripts. The first reading was a holistic analysis to obtain an overall sense of the landscape of data. The second reading of the data focused on open coding (Creswell, 1998) that identified general categories that were present in the data, as well as subcategories that were identified as commonalities and patterns present in the themes.

The third examination of the transcripts focused on axial coding (Creswell, 1998) to document patterns that overlap within the data collected from the semi-structured interviews, specifically how these professional leaders viewed the benefits, risks, and alternatives to the clinical doctorate as the entry-level degree into pharmacy practice. The transcripts were analyzed independently and recorded on a matrix that was structured on

how the interview schedule related to the research questions (Appendix A). Finally, the interviews can be classified in terms of the type of information that the content represents.

## **Results**

The results are organized by the research questions and constitute the framework for exploring the meaning of the responses. Each subpart of the research question is repeated in bold for the convenience of the reader. The actual interview questions from which the question is derived are repeated immediately after the sub-research question; for simplicity, the abbreviation for the Interview Schedule is (IS).

The sample consisted of a small number of prominent key individuals from the four stakeholder groups. It would be impossible to provide a description of the respondents without compromising their identity; therefore, the researcher assigned a tag label to the feedback from each research subject, displayed as Respondent 1, Respondent 2, etc., for all 14 participants.

This is a study of phenomena that occurred over 20 years ago, and the respondents are subject to two biases: recall and confirmation. Recall of specific details and dates may be difficult after a long period of time. People tend to remember things that confirm their beliefs and forget things that do not. The researcher made attempts to minimize both recall and confirmation bias during the interview process. At the beginning of each interview, the interviewees were asked if they preferred to start telling a story, with the researcher interjecting to remain within the content frame or if the researcher should ask specific questions. All participants decided to tell a story, and the researcher interposed to keep track of content and monitor the time. The researcher remained open to any unexpected and significant findings that emerged from the

interviews.

Finally, a note on organization of content is apt. Throughout, both patterns (and themes) that the author identified are done in bold (bold italics) to alert the reader to their centrality to the story that unfolds as the results are reported. Although themes were identified in a prior search of the data (open coding), the patterns that the researcher subsequently discovered as larger organizing structures that encompassed two or more themes (axial coding) are presented first, with the themes for that pattern presented within the content of description of each pattern. Together, these patterns and their respective themes facilitate telling the story of these respondents' retrospective on the decision to mandate the Pharm.D.

In order to give a holistic account, the author intermixed contextual information from interviews with background information from Chapters I and II. Information from the interviews generally provided the content for the introductory context following each research question and set of Interview Schedule queries. To the extent that background information from Chapters I and II was necessary to complete their story, that information is presented in square brackets for the convenience of the reader, thus making explicit that the information did not derive from the interviews. In addition, information from respondent interviews was handled in three ways: overall interpretation of an issue by the researcher, direct quotations, and direct paraphrases.

A summary outline (Appendix G) was created in order for ease of the reader to view the entire chapter in a holistic content. Each pattern is presented in bold, and its offspring themes are presented in bold italic. The last two patterns did not fit directly under any of the research questions and are addressed as additional findings.

## Research Question 1a

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate on:**

### **a. health professions education?**

IS1. In general, what benefits do you think the Pharm.D. has had on pharmacy education?

IS2. To what extent has the curriculum/knowledge base changed for students? What have been some of the trade-offs for changes in the curriculum/knowledge base for students?

IS3. The entry-level degree into pharmacy practice changed from a master's to a Pharm.D. Why was the Pharm.D. chosen instead of a Ph.D? How did this change the structure of the educational programs? Were more clinical hours required or length in program? Have institutions made the necessary changes?

IS4. Educational institutions had the responsibility of creating new Pharm.D. programs that satisfied the accreditation requirements. One controversy of the changeover has been the charge of "degree creep." Do you feel that programs have been successful in elevating the educational experience to the level anticipated?

IS5. Was there a formal, structured plan developed to assist educational institutions through challenges associated with the transition? What resources have been available to institutions and program leaders in regard to establishing curricular changes, faculty credentials, funding sources to implement the change, etc?

**First pattern: Historical accounts leading up to the ACPE mandate. There was a slow, gradually growing understanding that the practice of pharmacy both in hospitals and in community settings should be patient-care based. Because of the uncertainty and magnitude of the changes, this process was going to require comprehensive and explicit dialogue among all stakeholders.** [The respondents are people who took the leadership position to move the educational requirements that subsequently become, hopefully, a catalyst that moves the profession. They were advocating to better serve both patients and the community, in hopes that tomorrow they

will appropriately utilize the knowledge base and the skills that pharmacists have.]

Eventually, the knowledge base of the pharmacist will be recognized as unique and certainly much more comprehensive as it relates to pharmaceutical sciences and pharmacotherapy more so than any of the other health professions.

The majority of respondents recounted that the Commission to Implement Change guided the profession as to how the transition was going to work. The colleges set into place the design for the development and subsequent acceptance of this change in policy by the body at large. Then, a series of reports from the commission were disseminated to all the colleges in the country. This information and policy statements guided discussion among faculty at each of the institutions. Each pharmacy school used the internal process for curriculum change to debate the wisdom, or lack of wisdom, in accepting these changes. A vote eventually was taken by the AACP Board of Directors to accept each of these position papers as a process to implement the change. This happened over a number of years, finalized in 1992. The commission was reappointed in 1992 and dealt with some additional issues as well; thus, this development went over a long period of time.

***Theme: The decision-making and implementation timeframe was a constructive process; but it was very controversial, and there was a lot of anxiety about it.*** The ACPE could see how people could get in trouble with drugs, and the pharmaceuticals were becoming more and more problematic. Their use was more complex and the current healthcare system was not adequately addressing patients' needs with regard to drug interactions and complications.

This has been a very divisive topic for 50 years. Considerable discussion was held on going to the entry-level Pharm.D. as the only entry-level degree. At the beginning, people thought it would be a smooth transition. In 1989, when the accrediting body for

pharmacy (ACPE) made the pronouncement that all schools would need to go to the Pharm.D. and change the curriculum, people pointed to the law profession. This was the way the legal profession changed to the Juris Doctor. Everyone received a jurist doctorate and things did not seem to miss a beat. But that was not the case in pharmacy.

Respondent 3's acknowledgement of the "messy" change was echoed by Respondent 10, who recalled:

This was a very contentious process. I make this statement from the standpoint of I've been fortunate enough to have a very long career as a practicing health professional as a pharmacist. I think I saw that side of it and I also have been in the academic environment for about 30 years now. I have a view from both worlds and my assessment has been, as to some extent is true today, that this has been a very contentious process with pharmacy.

There continues to be many battles by schools to decide how to implement and fund the change and how to find the faculty and the sites for the experiential portion of the curriculum. Not everyone was on board with each school, nor within the association. The conversation surrounding changing the entry-level degree included extensive change at several levels, and numerous individuals struggled.

***Theme: Many respondents believe that pharmacists are the most underappreciated health profession. The pharmacists' contributions to healthcare are undervalued because they are invisible to the public.*** Respondent 11 believed that this philosophy goes back a long time ago and that pharmacists sometimes are their own worst enemy:

I first realized this after I graduated from college and became a pharmacist. I was drafted a couple months later and served in the Army for a couple of years. Being a pharmacist was unappreciated by the U.S. military. We were not officers. Anybody that they sent to Houston for six weeks, they thought they could turn into a pharmacist. I sort of had a chip on my shoulder about that for the rest of my professional career.

When the issue of pharmacists being commissioned in the military was being



debated in Congress, there was growing pressure to change it. At the same time, California was operating with the Pharm.D. degree and other colleges across the country were gradually instituting the Pharm.D. It may not have been the only degree issued but there were a lot of people working on the Pharm.D. and they had a lot more clinical experience.

A disconnection had occurred between some views about pharmacy practice within academia and within the world of pharmacy practice. Numerous strong exceptions were present at the time, so the environment was not uniform. However, there was an expansion of interest in the accreditation body for pharmacy education. With the 1970s came the early Pharm.D., although California had moved earlier. The majority of the country, however, began implementation during the early 1970s. Schools began training the Pharm.D., and also was the add-on Pharm.D.; but these were mostly in institutional (hospital) settings.

The ACPE pushed change; some of the schools were in favor, some were not. Schools were faced with an enormous investment and intensive work to change courses and curriculum. They first started adding hours to the curriculum. Respondent 12 recalled:

I remember that a bachelor's degree at University of Ohio for liberal arts required 116 hours and pharmacy needed 160 hours. So pharmacists were earning a lot more than a B.S. degree and were not being recognized for it. They kept adding hours to it so by the 1970s, there was not any profession with a course requirement as rigorous to become a pharmacist with a bachelor's. People would get a master's with fewer hours. It should have been a doctorate.

Not all respondents supported the sentiments that pharmacists are becoming more recognized as key players in healthcare delivery. A number of respondents [5, 7, 10, 12] believe that pharmacists have not traditionally been accessible to the public and that they fill prescriptions from behind the counter. Respondent 7 painted this picture:

In Washington, DC, go down near Congress and observe the pharmacy environment. Every pharmacy is very chain drugstore oriented, very few

independent representatives that do patient care. If the decision makers are not seeing pharmacists as healthcare providers, we have a tremendous issue. If the policy makers were serviced by a competent pharmacist either saving their lives or actually see a pharmacist intervene and make a difference, they might appreciate the knowledge, skills, and abilities.

Respondent 10 illustrated a similar thought:

Education is a relative concept. Some of the most educated people I know don't have a lick of common sense. You may be talking to one of those today but no pharmacy has done a good job of helping patients understand regardless of how educated those patients are. We have not done a job that is any good at all letting them know what we do for them as a profession and that is my problem because in my mind it is another opportunity. When a pharmacist is behind the counter, behind the computer, or in the basement of a hospital people have no idea what value is there.

Respondent 5 said:

Here is the challenge: The members of society that interact with community pharmacists hardly see them. They may have a draft window that they can talk to the pharmacist but can't approach them. Most of the time folks say there is no exposure to individuals who have more than minimal skills. There is the perception of the pharmacists being trained or educated or having the skills to provide direct patient care...in some situations, yes and in some situations, no.

Some practice leaders are beginning to change their operations because people are beginning to perceive the value that is out there. [Historically, people have seen pharmacists as merchants, not healthcare providers.] Society is beginning to see that pharmacists have the ability to provide pharmaceutical care to the people who matter. Many respondents [3, 6, 7, 9] are of the opinion that they see that we do have an important role in trying to conserve some of the costs in healthcare.

***Theme: There is still debate whether pharmacy education should focus on patient care or the product.*** Schools that are closely related to medical students lean toward patient care. One respondent noted that the top ranked pharmacy schools are on medical campuses. At an AACP meeting, Dr. Layla Esposito, then with the Health and Human Services, was discussing the proliferation of schools all over this country

[Respondent 6]. The question was posed as to why we have not observed the establishment of colleges of pharmacy at these outstanding colleges of medicine and health centers across the country. Respondent 6 conveyed her response, “Of course, because it is too expensive if you do it right.” Those not on a medical campus have a more difficult time securing training sites for experiential learning that really expose students to working with healthcare teams. An interesting observation was that our top ranked medical schools do not necessarily have pharmacy schools associated with them, but most of the state medical schools do [Respondent 6]. Many private or proprietary pharmacy schools do not follow this model.

**Second pattern: For this transition to be uniform and organized, it had to stem from the accreditation bodies and the educational profession. Curricular changes in pharmacy education were necessary for successful conversion to the doctorate level.**

***Theme: During the transition, many schools revisited their clinical curriculum in making changes because those 7-10 years sustained a major overhaul in***

***accreditation standards.*** The timing was right. Some schools had to address their approach to clinical training because the ACPE standards changed; they needed to sync with the accreditation standards. The ACPE demanded re-evaluation of the curriculum; many schools had their feet held to the fire because of financing. The accreditation agency is evaluated by the Board of Education every five years. Schools have to do a self-study, as does the accreditation agency, and send it to the United States Department of Education (USDE) for review. During the Bush and Obama administrations, the USDE came down harder on the accreditation agencies to ensure that they hold programs to their standards. Much of what programs do for accreditation stems from what the Department

of Education is demanding, i.e., accountability for education. All of the colleges of pharmacy in the U.S. are autonomous. There were 70+ colleges of pharmacy when this was occurring and when this started with the 1989 ACPE mandate. If all the colleges did what they wanted, we [Respondent 4, 8] would have a hundred different curriculums and there would be chaos and lack of uniformity. The outcome would have been a clear disaster for the American public.

It was a very stressful time for institutions: teaching two curriculums at the same time. The B.S. program was expiring, and they were adding in the Pharm.D. This was stressful on faculty, with considerable angst as far as curriculum revision; content changes; cutting hours and courses; and, hence, faculty, etc. Administrators were under pressure as well. Some schools conducted a bottom-up approach; some used a top-down approach. Some schools were more effective than others. The intention--why the school was implementing the program--was reflected in the success of the transition. Respondent 10 provided another example of the nationwide debate:

One example was the University of Illinois, where Walgreens is headquartered. They were hammered as a public university because of their movement to the all Pharm.D. program. The private universities that I have been affiliated with had a much easier time of this because of how those universities are structured. I am not saying one is better than the other. They were just different.

For many years, people responded and said, “You want me to do this, I’ll do this,” not embracing the idea of why. ACPE started asking schools to do certain things, pressing the issue of improvement until the schools had to embrace the idea of upgrading the quality of the program. At first, the classes were 10-12 students at a time. The schools built in working with medical students and with physicians. They developed an understanding of what a pharmacist can do. Concomitantly, research was increasing and this needed to be incorporated into the coursework. Schools really expanded the practice

of patient care, ensuring that the patient had the best use of drugs. That trend continued and expanded through the 1980s. A paper on pharmaceutical patient care really changed the landscape, describing how patients with chronic diseases in community pharmacies presumably could get patient care, obtain monitoring of their medications, and have access to the necessary intervention (Manasse, 1989). The pharmacist would make sure patients received the optimal benefits from their medications.

At the same time, Respondent 13 explained that the Pew Commission (Institute of Medicine, 1999) was tracking drug misadventures and medical errors and documenting how excessive drugs were being used and are to this day. Throughout this period and into the 1990s, external racket and unease in the healthcare environment flourished: that pharmacists could do even more, yet, were not allowed to exercise those skills.

***Theme: In order for the pharmacist to take on the responsibilities associated with drug management, pharmacy education would need to be revamped.*** Drug therapy was becoming patient-specific, based on effectiveness of the drug as related to genetics and metabolism. The pharmacist was in a much better position to possess global knowledge of all the drugs available to treat patients but lacked the hands-on clinical experience with what the drug was doing with actual patients. Reading about the statistics, research papers, and pharmacological theory was not the same as on-the-ground, problem solving with patients about how to avoid problems and maximize the benefits within the entire system known as pharmaceutical care [Respondents 8, 12]. Pharmacokinetics had become increasingly important, especially since it seemed that the pharmacy profession could not continue with the status quo, just taking orders from physicians to ensure that the patient got the right product. In effect, the pharmaceutical industry had taken over the process of producing medications, via manufacturing, that the

pharmacist had done prior to WWII.

[The recommendation to the academic community to convert from a Bachelor of Science program to a six-year Doctor of Pharmacy degree was made in 1948 after the Elliott survey was completed and presented to the AACP. At the time it was presented, it was a four-year Bachelor of Science program in pharmacy. After much discussion regarding the proposal, which the academic community rejected, a compromise was struck, leading to the five-year Bachelor of Science degree. The pharmacy school at UCSF in 1954 made the decision to convert to the Pharm.D. program.] Regarding the project at UCSF, Respondent 3 commented that it was something that made a difference and could apply to the whole profession: “It was slow.... [I]t took years to get beyond just the beginning idea [that] the pharmacist as a clinician had merit.”

Many Pharm.D. graduates in the 1980s and 1990s had spent 9-10 years in college getting this credential, and a number of them ended up on college faculties. Some went into industry, but they were still underappreciated except at big [research] institutions. So many ended up being unhappy. After the rigors of their education, there was dissatisfaction that many pharmacists felt a sense of underemployment. Respondent 12 illustrated the environment at the time:

I do not remember the dates/times until we get into the 1990s, but there was continued discussion and presentations by the academic community to move to the Pharm.D....[which]was continually met with resistance to change by academic people. Discussions over the Pharm.D., I recall very clearly at the time, there were 21 different schools of pharmacy that had some type of Pharm.D. program with different kinds of variations. It was never really a consensus if you will about the academic[s]. [C]hanging was in the profession itself about this Pharm.D. degree and stuff. Questions about the role pharmacy plays and the clinical applications needed to be answered and [these] were factors that led to the long-term evolution which took 50 years to get the Pharm.D. as the single entry-level degree.

***Theme: Concern was expressed over which degree was appropriate.*** The

respondents were unanimous in the opinion that there was minimal discussion regarding whether the degree should be a master's, Ph.D., or a Pharm.D. Many felt that if this was going to be a degree to be used by practitioners in healthcare delivery, a clinically oriented non-Ph.D. degree would probably better serve their needs. A master's is a graduate degree; a Pharm.D. is a professional degree in line with the M.D., D.D.S., etc. This made sense. [The Elliot report in 1948 suggested a six-year program for the pharmacy degree so pharmacy moved to a five-year degree.] It was labeled "*a bulging bachelor's*." The general consensus of respondents was that, in order to position their profession properly, a single entry-level degree to enter practice was necessary. Regarding the influence of pharmacists compared to decision makers in other healthcare professions, the practicing doctorate was needed in order to put them on a similar level of knowledge base, talent, and skills.

The other aspect of that certainty related to concerns dealing with the boundaries of the degree. Honorific titles have meaning that is embedded in the culture beyond the question as to whether the individual credentials say Ph.D. or Pharm.D. The letters that represent a credential are truly trivial in the total scheme of things. However, they are far more important to specific role groups whose identity is symbolized by that insignia. Specifically, university faculty were inclined to cling to that which makes them distinctive if not distinguished, i.e., the title after their name. Respondent 5 expanded on this situation:

It is pretty easy to think of a large group of individuals, these being academics, most of whom have, at some point in time, earned a Ph.D. after their name, squabbling about why in the world are we thinking about giving up this prized nomenclature to individuals that are clearly our inferiors.

***Theme: A large group of individuals, these being academics, opposed to the***

*doctorate as the entry-level degree into pharmacy.* To avoid all of the conversation, we [Respondents speaking here] basically had this degree be something that would be far less controversial. This doctorate relates to the clinical setting rather signifying that it is based on original research intended to advance the knowledge of humankind, which is the realm of the traditional Ph.D.

***Theme: The biggest curricular change was the addition of the one year of experiential work.*** The overall educational process shifted from predominately organic and medicinal chemistry to physiology, pathophysiology, pharmacology, and therapeutics. Students are not just learning structures, but are learning structures in the context of pharmacology of drugs. It is a different kind of experience. There are practical labs that simulate actual patient care experiences. The entire fourth year is experiential, where pharmacy students are exposed to practitioners, a year where the student spends a month on several specialty rotations such as family practice, internal medicine, cardiology, community practice, etc. [Respondents 6, 12]. Another label for students in these rotating experiences is preceptor; in education they are called student teachers.

The practitioners mentor the students; this is important because we need to prepare pharmacists to possess the confidence in themselves to approach physicians professionally and in an engaging manner to be part of the decision-making process and the patient care team. Some schools have introductory practice experiences for the first through third years so students are attending school and having practical experience the entire time until they graduate [Respondents 6, 14]. In order to provide pharmaceutical care, students must be able to talk and listen to people; thus the skills of writing, talking, listening, problem solving, and thinking outside the box are important. This is a very powerful combination and is true for all professional occupations.



Not everyone was sold on how the clinical aspect of the Pharm.D. played out.

Respondent 12 was an outlier on the benefits of the experiential component:

I do more of the clinical education or Pharm.D. program, the clinical education piece. You can really get my blood pressure up on how we do clinical education, I think it is a waste of time.

My criticism of pharmacy education is the experiential piece. I am tired of having students coming to my class and say the three out of the eight rotations were a total waste of time. To send students to CVS pharmacy while in college and call that community pharmacy rotation, which is suppose to be clinical and have a little counseling. This is what is happening throughout the country and meanwhile in the last 10-12 years, we have increased the number of pharmacy schools and the number of students without having the clinical capacity to take care of it.

**Third pattern: When converting to the Doctor of Pharmacy degree program, many institutions experienced internal resistance related to universities and their educational programs.** Isolated situations were noted where the institutions found it difficult to make the transition because of abundant resistance. Many of these were not research environments. The pharmaceutical accreditation body had increased its expectations of research activity, largely to support the scholarship by Doctors of Philosophy. A handful of proprietary schools have had a difficult time. The culture of these schools is what primarily drives the thought process, led by the composition of their board, which from the beginning, was, “I am here because I am a pharmacist” [Respondent 6] and not an academic scholar. That mentality proved difficult to accept during the transition to professional practice, and many of these individuals still struggle with it.

***Theme: The state universities, in many cases, were much more research focused and research intensive, with NIH or FDA funding, and that is viewed positively across the country and internationally.*** The private universities are more focused on educating a student to be a solid citizen in the community. Their two-year

focus on liberal arts has remained the same, i.e., trying to have a student finish with a well-rounded perspective of how a citizen should act in society. This is an inherent component. Respondent 10 provided an example:

One example was the University of Illinois, where Walgreens is headquartered. They were hammered as a public university because of their movement to the all Pharm.D. program, but the private universities that I have been affiliated with had a much easier time of this because of how those universities are structured.

***Theme: Schools that established the educational model of the***

***Pharm.D./medical school had an easier time with the transition.*** Many private schools went through what was called the add-on Pharm.D. They had a B.S. program and added content to satisfy the basic accreditation requirements for the Pharm.D. Most respondents perceived that interdisciplinary training was a key factor in the success of the transition in many schools. Respondent 1 explained that, at his affiliated school, medical students are trained that, in case of a drug question, a pharmacist answers that question. We hardly teach pharmacology to medical students anymore. Respondent 8 illustrated his situation with collaborative education:

We do not have a medical school at this institution but we work closely with a state medical school and are part of their basic science of their medical curricula. We have become part of the medical complex but we have to rent space from the medical school. This required more faculty as well, so I had to raise tuition. It was a hard sell, but we were able to accomplish that.

This specialization of content is a problem for many health professional schools. Most medical schools accept that they cannot teach everything they want in their curriculum, yet the logistics related to the sheer number of students is overwhelming. The thought of getting 140 pharmacy students together with 200 medical/nursing students into one integrated curriculum is a daunting prospect, even if all three groups are in the same university. For schools that are not linked through a common institution, and often not

even by contiguous geography, daunting becomes nearly impossible. Respondent 14 explained his experience:

Nursing did not want the Pharm. D. They were taught that only nurses can teach nurses and nurses have the responsibility for the medication. Many nurses that I knew did not want the pharmacist second-guessing them so to speak. But this is changing. When pharmacy was going to the all Pharm.D., the nursing association would not support us.

***Theme: It was a struggle to create another position called clinical faculty. This position was necessary because of the inclusion of the experiential component that was added to the curriculum.*** This new position had just as rigorous requirements for promotion as did the basic science faculty, but they did not have the obligation to do as much federally funded research as the basic scientist. What is the status of the individual who is a professor in the area of pharmacy practice at institution A versus a professor of pharmacology and toxicology at the same university? We would hope that it is a simple answer that they enjoy equivalent status but the answer is twofold. Respondent 14 illustrated the dilemma of clinical faculty:

When I was at a different research institution the Pharm.D. were prohibited from chairing a dissertation committee. I think that has changed now, but then that was true.

***Theme: Originally, a shortage of clinical faculty in the Pharm.D. programs existed. A major challenge for the programs was obtaining additional clinical faculty.*** When Pharm.D. programs first started proliferating, there were not enough qualified instructors were available to fill faculty positions to train the prospective students. Back in those days, over half of a Pharm.D. class went out and got academic jobs at other institutions because you [Respondents 1, 8, 9, 14] needed these kinds of people if you are going to do this kind of curriculum. So they would do residencies and then go out and have academic jobs. That was a big thing.

The ACPE Commission to Implement Change in Pharmacy Education recommended that all programs include a clinical science minimum in the pharmacy school curriculum that was patterned after medicine. The clinical science faculty would be those with bedside manners as well as experience in the laboratory [Respondent 8]. Schools utilized some of their own faculty but had to look for additional clinical instructors with practice experience. This was a challenge because all of these programs had to develop a year of clinical experiences and all needed experienced faculty. Ultimately, creating another position called clinical faculty proved difficult.

In the early 1970s when Nixon was president, an infusion of federal money into health education occurred. Money was available to hire more clinical faculty if the institution converted to more clinical education. This concept was fostered by the profession and is now under debate for its effectiveness. The question under deliberation is whether schools need more clinical sciences and practice-based research or increased theoretical focus. Pressures exist within universities to obtain federal grants, and the effects of this on staffing clinical faculty are apparent. Respondent 12 noted:

In my most recent experience, we find busy practitioners in different practice settings and less and less of the full-time paid higher clinical faculty. They have outsourced the benefits of clinical faculty and moved the positions over to get research faculty because of the pressure on public universities to get federal grants.

***Theme: An issue faced by the schools is how to treat these new academics in terms of getting them promoted.*** This issue depends on the culture of the university that we have called University A. They were going into academic institutions, and the traditional way for promotion in academic institutions is research funds and publications. That is what is happening with new faculty members. Local pharmacists want to teach clinical pharmacy and to spread the word. Respondent 1 said: “That is not easy, it was not

even easy here because we are a strong research institution so to get our clinical people so that they could start competing at the academic level took some doing. We actually initially put them on a different trajectory that they weren't on a tenure-track. That has changed over the years. They have developed their programs at UCSF and USC in CA." Clinical professors are on a different track than academic professors. Tenure-track faculty are required to publish and bring money into the university. Clinical track faculty publish in a different way but are not on tenure track...[as a] one-year continuing contract, maybe after time, a three-year contract. Respondent 2 shared his experience:

I remember when the first Pharm.D. was hired at my institution in 1972. It was like who are these people and what the hell are they talking about. Although what you have learned is different, must be applied differently, but the degree qualifications are equivalent.

Now, I would say that people on the Ph.D. track have a different understanding of how to operate and solve problems. To me there is a commonality that they can write better than others. If you have done a dissertation, you understand what it takes to be a reasonable writer and defend things with logic.... That is a difference. There is no such animal in professional doctorate programs. A capstone project is as close as they get and you cannot do that without going fulltime.

***Theme: Within the schools and colleges of pharmacy, the biggest opposition was the basic science faculty.*** These faculty are scientists who were focused not necessarily 100% on teaching; their work also included research, which was how they were promoted. That was what gave them credibility within the scientific community. Then, suddenly, they hear of this group of people in a new department called pharmacy practice who do not have a Ph.D. Many had a Pharm.D. or even a master's, yet somehow they were supposed to be considered to be professors just as those with their Ph.D. All the time and struggles to train for and then conduct the work of scientists were being discounted. So, within these schools there was a fair amount of contention between the

basic science component and the pharmacy practice constituent. Respondent 12 thought that academics do not like change, and some people see no reason for all graduates to have the Pharm.D. degree. They still argue the case that maybe there should be a Bachelor of Science in pharmacy.

**Fourth pattern: Institutions making the conversion to the Doctor of Pharmacy degree were met with external resistance with respect to the practice of pharmacy.**

*Theme: Opposition was present within the profession as well as within the universities.* Not one organization speaks to pharmacy in the U.S., such as the ASHP and the ACCP. Approximately 37 were intent on doing it the right way. A few of the professional organizations did not support the Pharm.D. until after the Millis Commission in the mid-1970s [Respondent 12]. The ACCP was opposed because they began as a group of pharmacists who were involved in some great things. The Pharm.D. was going to negatively impact the image.

The strongest opponents were the medicinal chemists; many were very conservative and certainly resistant to change. Some even had family traditions based in the medicinal practice. It was not uncommon to hear that one's grandfather was a pharmacist and he did it this way, and my father was a pharmacist and he did it this way, and this is the way I was educated and the way I want to educate my sons and daughters. Respondent 3 illustrated this situation:

Opposition was mostly internal. I do not recall a lot of discussion from AMA or any other practice groups. The biggest groups were the NACDS, which I ended up resigning the presidency of that organization because I would not speak out against the bill.

The AACCP attempted to initiate discussions across the country with the various

professional organizations, knowing that not everyone would agree but trying to achieve some consensus to move forward. The AACP felt that a natural ally would be the American Society of Health Systems Pharmacist (ASHP), but the organization was not a supporter. The AACP's theory was to identify those with whom they could work because they might, in some cases, make an impact such as a medical school, or they may impact a decision maker at a national level such as NIH or FDA [Respondent 10]. The AACP was successful in forming alliances because some really driven members in the professional organizations were committed to finding as much support as possible. Many individuals were committed to making the Pharm.D. work, rather than institute regulations to boost their egos; but they really felt it was best for pharmacy and therefore, was going to be the best thing for patients. So how, then, can we [Respondent 10] pull in these amazing folks and identify those within Walgreens, CVS, and Rite Aid who might support the mandate during deliberations?

Some individuals still see no reason for the all-Pharm.D. degree. A divergent opinion from a few respondents was that the whole discussion from the beginning in the 1970s, 1980s, and reaching a crisis point in the 1990s, was all about the initials behind someone's name. It was not about trying to help patients with what they need, such as drug management, advice, and information, to be healthy in the U.S. As Respondent 10 noted:

A friend of mine in Oklahoma said you know this organization strongly opposed it [the all-Pharm.D.] but I will tell you today that we have found out that it is the best thing that happened to pharmacy. I about fell out of my chair.

***Theme: Many of the people who held a Bachelor of Science degree (B.S.) in pharmacy as the main credential for a lifelong practice as a registered pharmacist were facing a dilemma.*** The ticket to beginning a practice in pharmacy is a license. It doesn't

matter whether you possess a Pharm.D. or a B.S.; the license is required. This constitutes passing a standardized examination that is recognized by each of the 50 states. Many with the B.S. degree in pharmacy felt they would be viewed as second-class citizens. The B.S. pharmacist worried about losing prestige and faculty positions.

Respondent 7 illustrated how this trend continues today:

I remember having a discussion with one of our faculty this year about the experiential portion of our curriculum. I asked him to come into the office to discuss it because he had then a very strong opposition to it and it was clear. So finally he said what you make is a very good argument but I come from a very very poor family and I cannot see adding another year of education or another whole year of paying tuition. I just can't see the value of additional training especially in the clinic. It does not make any sense. Respondent 6 echoed Respondent 7 with this story:

In the early 1980s, the institution that I was affiliated with supported the Janus report and implemented the Pharm.D. degree in 1984. I was the dean and was trying to raise financial support for the Pharm.D. program. I pledged to the folks at the pharmacy school, the president, and the pharmacists in the state that this state might not be among the first to have a Pharm.D. program, but that we would not be among the last.

The pharmacists with B.S. degrees in that state were of the opinion that they were going to get grandfathered in. I said: "Why I don't think I'm going to be able to do that boys." I had a little battle. That would be a violation of academic integrity, academic fraud. To that there was a lot of opposition. This was a very difficult time. The AACP was following it very closely.

Those opposed felt that the retail pharmacist would be put out of business unless all were grandfathered, but to do that would defeat the purpose of a Pharm.D. Those opposing the blanket waiver argued that a degree is granted by an institution which, based upon specific requirements completed, grants a degree; and no one has the authority to grant a degree to someone who has not done the work.

In the end, a lot of practicing pharmacists had to adjust. Many of these smaller pharmacies had been in the family for generations and were now being bought by chain stores. They were just trying to survive this era of consolidation, and this was another



blow to them. They had an antiquated degree (the baccalaureate) and felt their profession was abandoning them. In contrast to these personal struggles, many of the advocates focused on the abstract notion of the “greater good,” trying to explain the value of the degree enhancement and the value to the profession that enhances everyone. If pharmacists were to continue to get paid high salaries for essentially pouring pills out of a big bottle into a little bottle, eventually the state board of pharmacy would not extend a license [Respondent 8]. So, unless the profession elevated its work to reflect the education, thus adding value to society, that profession would disappear.

Most of those affected understood the broader argument; some went back and received the Pharm.D. degree, mostly the young practitioners. Ultimately, the rationale that society absolutely needed a group of professionals who understood the actions and interactions of drugs carried the day, i.e., that the complexities among so many drugs are complicated and advanced education is necessary for adequate understanding. Drugs are so much a part of everyone’s lives that members of this society cannot deal with it by themselves. People need help; they need educated advice, so a theoretical foundation is essential. Then that foundation had to be developed into a curriculum that included not only content, but also the process of problem solving and communication. Respondent 11 expressed these thoughts:

I have been a pharmacist for 60 years, so I have gone across the spectrum. You may not believe this but I have practiced side-by-side with pharmacists that had six weeks of formal training, some with one year, some with two or three, and some had ten years of formal training.

The pharmacists that were bachelor of science pharmacists including myself, had to pass the test after we went through all of this self-imposed educational work on how to better serve our patients. I was 67 years old or something like that, but we were committed to our practices.

This continues to evolve since we bought our own pharmacy in 1965. We have

one building, one facility. My son and his wife are pharmacists. They run the place. We have the building with a group of physicians and other practitioners. We are close to major cities that have dozens of specialists and we try to serve them by having a respectful relationship. We have a super Walmart here. So the fact that we are employing six pharmacists speaks of our service and reputation.

***Theme: The B.S. pharmacists said “wait a minute”; soon people will be asking for a Pharm.D., and we are not going to be considered for some positions.*** Respondent 3 noted that the decision makers knew they would make the B.S. pharmacists unhappy because they did not want to feel that they were being slated as second-place citizens.

Respondent 10 expanded on this issue:

One of the issues was that many of the people that had a bachelor of science degree in pharmacy as the main credential for practice, who had a life as a registered pharmacist, were feeling slighted [and] felt that they were being short-changed. They believed that the B.S. degree, which gave them the ability to pass the licensing exam recognized by each of the 50 states, was no longer suitable. So this looks like I will be a 2nd class citizen now to somebody who gets the degree of *doctor* and they are still a pharmacist like I am. Why should they be viewed more positively or differently?

Pharmacists with the B.S. degree have found it difficult to practice at the higher level [Respondent 8, 10].

***Theme: The ability for pharmacy practice to evolve is dependent on the opportunities that exist in community and hospital practice settings. The responsibilities and duties of pharmacists are expanding in the work-place environment, but very slowly.*** In some states, pharmacists now have been providing immunizations. Not all states are at this point, but the influence has been instrumental in changing some states [Respondent 5]. The people who formulate such rules of practice are situated within the professions. But even as they extend their professional reach, they resist including anything that will inhibit them from continuing what they already are doing. Respondent 14 illustrated the importance of state governance and scope of

practice:

We work in a collaborative practice with agreements with both physicians groups and pharmacy groups [who] sit down together and are supported by state and state board of pharmacy. We have a state pharmacy congress that meets on a regular basis and I think we are the stimulus for changes in the scope of practice for pharmacy. We are putting together recommendations for a bill to the next legislative session here that will greatly broaden the scope of practice. Pharmacists will be recognized for their ability to manage patients. It is going to come, but it is slow.

I tell our students that when they graduate, it is their duty to join the local, state, and national organizations and volunteer for committee work, run for office within the next 10 years so they can control it and they can change [it]. Go to the state meetings and see the leaders who are getting ready to retire. If you want change, you have to be involved.

[In 1989, the ACPE mandated the Pharm.D. as the entry-level degree for a licensed pharmacist, providing the opportunity for the profession to expand and increase the pharmacist role in the rapidly changing healthcare system. The role of the pharmacist was visualized as patient-oriented, the mission of the pharmaceutical profession eventually being adopted as pharmaceutical care, moving away from the historical product-oriented responsibilities. The mandate for the Doctor of Pharmacy as the entry-level degree, and the concomitant pharmaceutical mission, were credible steps for the advancement of the profession; but there were many external influences existed for successful implementation, one being the healthcare environment. As a result of the Janus Commission's investigation into the changes occurring within the U.S. healthcare system, the ACCP was convinced that the changes in the U.S. healthcare delivery system, economic growth, education, and health management systems had set the stage for transformation of the profession (Janus Commission, 1997).]

The work environment has been changing with more and more of the better positions going to the Pharm.D. graduates. At the same time, students are attending

school during the greatest biomedical and pharmaceutical information, both prescription drugs and over-the-counter products that has ever existed. Practicing pharmacists will face difficulties if there is too little time to teach all of the necessary knowledge and skills.

When asked if the profession has been successful in becoming primary pharmaceutical care providers, Respondent 5 said: “The question is if the whole profession changed to pharmaceutical care, which pharmacists are qualified?” For example, if a student graduated from pharmacy school five years ago and went to work for a chain drugstore and had adjusted well to filling prescriptions day in and day out, some certain skills gained while in school have been lost. Even though the profession has a term *pharmaceutical care*, the care part is not played up that much. It then creates a perception that pharmacists are not trained or educated to provide primary care.

***Theme: The respondents unanimously agreed that the primary external opposition came from the chain drugstores and owners of regional chains.*** The major employers of pharmacists were those against the Pharm.D. The chains lobbied hard with considerable funds targeted legislatively. Rhetorically speaking, these larger employers argued for stepping back and looking at this process: Let’s have open forums, open dialogue, and discussion [Respondent 3]. But this strategy was not embraced.

One major opposition came from the National Association of Chain Drug Stores (NACDS), which entity is made up of CVS, Walgreens, Right Aids, the large grocery stores, etc. The chain pharmacy community was adamantly opposed to extending the length of education because it would cost more to hire pharmacists, and they were losing workers because of the negative environment. They spent millions of dollars fighting it [Respondents 3, 8]. At one point, the president of USC received a letter from the NACDS

suggesting that they reconsider moving back to a bachelor's degree [Respondent 10]. In the state of Maryland, an incredible fight was occurring in the legislation to get the Pharm.D. approved in higher education [Respondents 9, 13]. The stories go on and on.

To double the contentious environment, a member of the NACDS served on the AACP board at the time. That is when things became heated. The chain drugstores adamantly opposed the situation, and now they embrace and support it.

Respondent 14 demonstrated this change of position by the chain drugstores:

At the last chain drugstore meeting in Florida a couple of months ago, the people from the top were all saying how we need to make sure our pharmacists are away from that dispensing mode and taking care of patients in improving outcomes. I have never heard that before now. I think they are changing, but they have a long way to go.

Many consumers do not appreciate what a pharmacist can do for them as a healthcare provider because they enter a large chain pharmacy and bypass cigarettes, past alcohol and garden supplies, finally to reach the pharmacy. The public image of pharmaceutical care is all too often viewed as a product, not a healthcare service [Respondent 14].

Some chain drugstores such as Walgreens, CVS, etc., now have patient care groups; nurse practitioners and pharmacists combine their expertise with the traditional chain drugstore, becoming more of a health center. The industry has a long way to go because the public does not appreciate the advancements in pharmacy education. Also, they do not understand what the new knowledge has done to make them healthier and less likely to experience adverse drug reactions or be put in the hospital because of poor adherence or interactive drug therapy [Respondents 8, 14].

When the University of Maryland went all Pharm.D. in 1993, the arguments among the university, community, and across the state of Maryland were parallel to those

occurring at the national level. Indeed, many of the chain drugstores in Maryland bitterly opposed the school's effort to go all Pharm.D. They were afraid that if Maryland, a major flagship school, was able to go all Pharm.D., it would undermine the efforts to stop the national movement toward the all Pharm.D. [Respondents 9, 13]. For a few years, this became a focus of the political discussions around pharmacy education. The transition at the University of Maryland did not occur immediately. The request for an all-Pharm.D. program failed a few of times before the University voted to accept the curriculum for the Pharm.D. At the time, Maryland was the only school in the state to offer a Pharm.D. degree. There are now three: the flagship institution, a small liberal arts school, and University of Maryland Eastern. Respondent number 13 illustrated the chain drugstore opposition:

I remember in maybe 1994, in Maryland and the CVS went to state legislature to propose a bill that the University of Maryland College of Pharmacy would have its curriculum forever (I am paraphrasing but that is basically what it said). So they loaded all of us on a bus and took us down to Annapolis and Baltimore and had us go talk to legislators about the profession. I remember it was my introduction to the legislative process. I walked into one legislator and gave him my spiel and he said that is all very nice but already traded my vote on that issue. It is a change effort and I think it just took a political front. We pretty much felt that we were in charge of our school, but the truth is we weren't you know.

**Fifth pattern: Recognition that the impact on students and the entire educational experience was an important factor in both the decision and implementation of the professional doctorate in pharmacy.** Many opponents [Respondents 3, 7, 12 speaking] thought having everyone on the six-year program would dilute the quality of training. If one looks at the old five-year program, a student may have about six months of experiential learning so the six-year program added about six more months of experiential and six months of didactic learning. The six years provides a good background, with the baseline of competency that the pharmacists need for general

practice. For those graduates who want to specialize in a certain area of pharmacy practice, a residency is the appropriate route. This is where people learn to practice. It is not possible to train an infectious disease specialist or a cardiology specialist in six years.

***Theme: A student can't go through this program without going full time and having a structured curriculum.*** Students move through as a class core, and the socialization of the class cohort yielded one of the most powerful benefits that was unexpected [Respondent 3]. Students are systematically and deliberately chosen with the likelihood of being successful, so you end up with a cohort of people who represent a narrow band of intellectual goals and concomitant curriculum. When they spend 40+ hours a week together for four years, they learn how to work together. We used the term *Problem-based learning module*, but small-group inquiry takes it to a new level. One begins to realize how important it is to work together, and the outcome is an individual who is better equipped to work in any environment because they understand the value of working together. That is an abstract idea.

***Theme: There is a sense that, to differentiate themselves now, new graduates have to get residencies or certifications.*** Having only a Pharm.D. now simply means you are a pharmacist. It doesn't carry the distinction that it did back when the programs were small with 200-300 people graduating a year. The issue now under debate is that one has to have a residency. Not all respondents were pro-residency because it is cost-prohibitive to put all students through a residency [Respondents 2, 5, 12].

***Theme: The type of student attracted to pharmacy is part of the problem.*** Consider Meyers-Briggs: a pharmacy student is typically going to be structured, want to know what the outcome is going to be, "tell me what I need to learn and I will do it." Respondent 6 said: "It is incumbent upon us to do a much better job of preparing our

graduates to be independent, self-disciplined learners, critical thinkers, and problem solvers.”

Many curriculums still use the “talking head method” of educating students because there is only enough time to address 20% of the necessary knowledge base. It is unfair to tell students what they are supposed to know; we need to teach them how to learn and how to go about the learning process. Respondent 6 expressed this concern:

Since I graduated from high school 50 years ago, the changes in history and English have not been much, added new ideas, but pretty much the same. How much has changed in science and of course, pharmacy? So, it is incumbent upon our bright listeners to stay on top of what is going on in order to be a factor in taking care of their patients and to be effective in working in a constantly changing environment.

Prior to the Pharm.D., the typical recruit was a student who did not like to work with people. They preferred to be behind the counter and fill prescriptions. Today, we see a totally different attitude, and they want to help people. Some respondents [1, 8, 13, 14] believe that one benefit for the Pharm.D. in pharmacy education is the recruitment of a better-rounded student, ones who are passionate about providing care to patients and are focused on what they can do to help people, better utilize their pharmacy education, and teach patients how to be healthy.

Many schools have made changes in the admission standards. All respondents affiliated with a pharmacy school [1, 3, 4, 5, 6, 7, 9, 10, 13, 14] noted that 50% of the total application and admission process in their programs is grade or test based. The other 50% considers students and what they have done to participate in community related or organizational activities, leadership, and communication skills. Those abilities weigh very heavily in most admission processes. Respondent 4 said their application process requires interviews and essays to evaluate communication skills; but once they get there,



it is lost.

Candidates for admission in pharmacy programs had sufficient time in undergraduate systems to become fairly well rounded, but usually the pre-professional programs are heavily weighted on science. When they get to pharmacy school, although it is a competitive program, it is just pharmacy. They have little knowledge in sociology, economics, etc., that is needed to enhance the education. The educational system of pharmacy is starting to recognize this and requiring these courses for admission.

Respondent 4 explained why this is a problem:

You may not hear this from anyone else, but I think we teach too much drugs and diseases and do not teach enough about how they are involved in the sociology of healthcare. Students are part of this situation because they don't like the other stuff. They like and are interested to learn about [a] disease and how it is treated. So the contextual content of a pharmacy education is kind of downplayed even by the faculty. [L]ets learn more about drugs and diseases and a little bit on how to communicate.

**Sixth pattern: The changes in pharmacy education curriculum as related to academia have been an evolution, not a revolution.** In the 1950s there were four-year degrees, five-year degrees, and some Pharm.D. programs in California. We [Respondents 1, 3, 9, 14] had degrees that, originally designed to be honored at 50 hours, were moving toward 120 hours. In 1962 it was mandated as a five-year degree program that included one semester of experiential education equaling about 150 hours. At this point, pharmacy was a “bulging baccalaureate” [Respondent 3]. The length of time to completion had increased because individuals felt the need to increase ideas and add content into the curriculum. We had some schools of almost 280 credit hours. It was truly a six-year Pharm.D., which meant we had to make some type of change.

The same respondents knew they were going to have trouble. Leaders understood that they needed to be informed because the suggestion was to change the educational

model. One concern was whether the curriculum would be watered down because the Pharm.D. would now be the generalist degree. Some argued that keeping students in school longer for these experiences would be too expensive. We went to the students, and they said it was important.

When discussing curriculum, institutions should be encouraged not to focus not on credit hours but think instead about the endpoint competencies that graduates need when they leave. What should they be able to do in the patient care environment and then work backwards to determine what is needed in the curriculum. Respondent 14 illustrated curriculum changes:

Our curriculum is drastically different than many pharmacy schools. It is all team-based small-group active learning. Faculty in medicinal chemistry, pharmacology, pharmaceuticals, and the clinical faculty are all together working with the students to look at how they approach and solve problems about patient care.

***Theme: The ACPE developed the add-on Pharm.D. to allow B.S. pharmacists to upgrade their credentials.*** [The ACPE and AACP believed] that institutions needed to have continuous education programs that assist those who want to do this work but don't have the skills. This will bring them to the level where they can be recognized and paid for their services. Thus, because the argument that the already-licensed B.S. pharmacists had some validity, programs were developed that allowed these professionals to go back to school for training online, weekends, etc., to get the Pharm.D. Conflict revolved around the nature of the curriculum that would prepare such an individual (older pharmacist with less than a Pharm.D.) to help resolve, accommodate, or at least interact professionally in a manner consistent with the best practice standards and the current critical problems that the nation faces: giving students experience with illnesses and concomitant use of drugs, managing this ominous availability of drugs [Respondents 6,

14].

***Theme: The complexity of drug interactions is rising and it is necessary to educate pharmacists to reflect this with skills in patient counseling.*** Over 50% of patients take medications, yet educators don't seem to want to be engaged in counseling patients at the student level. Pharmacy programs need a different kind of student and mission. We [Respondent 3] have ended up bragging about the highest GPA when they enter - the brightest students. But what happens when we follow the student through the professional education program?

***Theme: The changes wrought by the new Pharm.D. required extensive debate about and changes in pharmacy curriculum and instruction.*** The establishment of the Commission to Implement Change in Pharmacy Education was the turning point in pharmacy education. [The first of seven background papers written by the Commission (1997a) focused on curriculum and instructions]. Through all of this, we [Respondents 1, 6, 8, 9, 14] were able to develop the overall degree, with the Pharm.D. as the generalist degree and residencies after graduation that would allow students to concentrate in a particular specialty area. Huge changes occurred in the curriculum. The curriculum has been in the process of evolving over many years as the nature of professional practice changed. Respondent 3 illustrated the curricular debate:

At the 1988 ACPE meeting in Monterey, CA, the president and CEO of NACDS came to the council and discussed that we needed to add three additional courses, computer statistics and geriatrics were two. I agreed that they needed to be there and asked what we could take out of our present program to make room. The comment was we couldn't find anything that we really want to take out. We feel like it would make our foundation unstable to take some of these [current classes] out. I said that we have a problem because we have [to put] these additional hours into an already bulging bachelor, and to honor a B.S. degree is frankly a bunch of BS. That is what kind of kicked the pot over.

The institutions were given eight years to prepare to do this because the first class was in

2000. Once most of them bought into the new degree, they needed funding to increase the number of practice facilities in addition to rearranging the content and sequences of courses.

Debates over curriculum are the most important but also the most difficult. What can be taken out, why should this and that be put in, how is this to change? The excision of material becomes personal to the faculty who have are so dedicated to the courses that they teach. Academic arguments over curriculum are among the most vicious of all academic disagreements. Respondent 4 illustrated the discourse in academic arguments:

Everyone stands in a circle, points their rifle inward, and shoots. The reason why it is so almost hateful is because the arguments are so important to the individual. Because when anyone outside this circle looks at it, the person outside the circle realized the arguments are so vicious because the stakes are so small.... [Y]ou know for the individual whose 12 lectures are going to be removed from the curriculum. Anybody outside would be like 'get a life' and get on and do some other things that are maybe far more important than this, but those 12 lectures sometimes represent the life of the individual and the self-esteem of the individual.

***Theme: The Commission to Implement Change did not approach this conversation from the standpoint of whose material was going to be deleted. It was far more concerned with how the program could obtain what was needed or a curriculum to reflect the nature of the practice of the profession, and to do this in a reasonable period of time.*** The commission was looking at the amount of basic information, pre-professional information that was advancing that which was necessary for the pharmacist to know and needed to learn and master by the practitioner. The amount of information was growing at such an enormous rate that we [Respondent 4] were looking at the best way we could fit this into an efficient timeframe. It ended up being a minimum of two years pre-professional education and four years of professional education. This new six-year program was a simple jump from a baccalaureate degree to a professional doctorate

degree.

***Theme: The combination of new requirements in content and knowledge for the Pharm.D., as well as necessity of background understanding of science, has led some schools to institute a pre-pharmacy program requirement of up to three years.***

Compounding the staffing issues for the new clinical instructors were the assessment program requirements that had been driven by the Department of Education [in that state]. On paper, pharmacy schools made these changes appear positive because it was a mandate [Respondents 7, 11]. Yet, the amount of effort put into making the changes varied widely because of so many new assessment demands. By the time program leaders had implemented one, something new was on the table.

More and more schools are making the three-year pre-pharmacy mandatory. In some schools it was four years and then three to four years of professional programs because one cannot teach everything that a student needs to know. In today's society, it is equally as important for graduates of educational programs in the health professional fields to possess a good basic education as well as science and math, but this means ending up with three to four years of pre-professional studies [Respondents 6, 7, 11, 12]. Add the whole load of the pharmaceutical program and you end up with eight years to graduation.

***Theme: One result of institutions being required to bring in additional qualified people to implement the revised programs has been a rise in tuition.*** Tuition hovers around 20k/year, but there are a lot of private schools that are much higher. Students are graduating with horrendous bills, \$100,000 or more debt from their education. Several respondents [6, 9, 12, 14] commented that higher education does have little sensitivity to the rising costs of education. Respondent 14 had the idea: "I would love to see some type

of loan forgiveness for pharmacists. If they could get part of their loan forgiven if they practice 3-5 years in an underserved area.” Respondent 12 said:

As long as they keep having the number of applicants, they do not really care. I had these discussions with associate deans on campus and I have four grandkids and am gasping on how my family is going to get these kids through college.

***Theme: Not one grand scheme, template, or module exists to follow. A formal, strategic plan was not developed to assist institutions through this paramount change process.*** [The ACPE established the mandate in 1989 that in 10 years every school had to be a Pharm.D. program, but the AACP did not sustain that position until the middle of the 90s when the Commission to Implement Change (1997c) published the third round of papers. The Commission to Implement Change in Pharmacy Education was appointed by the AACP in 1989 and 1992 (Buerki, 1999). The commission was comprised of academic personnel and was charged with determining the specifics of the curriculum change process and content. The Commission’s background papers (1997a, 1997b, 1997c, 1997d, 1997e) basically came out and recommended that it was time to go to the Pharm.D. degree.] This second paper (AACP, 1997b) was a tentative foundation for the transition. Respondent 3 illustrated the scenario:

As you look at the ACPE original declaration in 1989 stating that they would move forward with the plan to implement the Pharm.D. as the entry-level degree to be credited. There had been a lot of conversation going on that led to that decision and it was inclusive conversations. The ACPE did not just wake up one day and say we want to do this. These discussions revolved around where the profession should be and what it could be. This took a change in acknowledgement and it was messy.

No direct financial support was available from professional organizations to individual schools because professional organizations just don’t have that kind of money [Respondents 2, 9]. Each individual school was given the freedom, relatively speaking, to devise the new Pharm.D. curriculum and overall program and to develop the specifics as

they saw fit, as long as their particulars were consistent with the overall parameters of the new Pharm.D. as set fourth by the ACPE [Respondent 10].

On the other hand, there was support from the accreditation agency, ACPE. Documents were related to the standards, the structure of the curriculum, and a fairly lengthy timeline was in place to give the schools the opportunity to develop the programs. The AACP was out in front in reform efforts. The association assisted schools with both curricular reform and faculty development. The AACP was very active in providing seminars and intellectual support to the schools regarding when and how to move to the Pharm.D. program [Respondent 2]. There certainly was a lot of encouragement and cheerleading efforts to persuade schools to pick up the pace and move this as rapidly as possible.

### **Research Question 1b**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

#### **b. the delivery of service?**

IS6. The profession adopted the mission of “pharmaceutical care” as more comprehensive, going beyond dispensing medications. Do you think the profession has been successful in becoming primary pharmaceutical care providers?

IS7. How have the state regulatory agencies accommodated the advanced knowledge and skill base of the pharmaceutical professional? Have they expanded the scope of practice and revised the licensure requirements?

IS8. How has the distribution of services been affected? For example, what affect has the Pharm.D. had on rural or underserved communities?

IS9. There were many opinions voiced in publications about how the Pharm.D. would affect the delivery of service. Some reported that, with the increased autonomy, the pharmacist would have direct patient contact and be the primary manager of the patient pharmaceutical needs. Others reported that with the increase in knowledge and skill, the new Pharm.D. would focus on increased financial opportunities and move away from direct patient care. Now, 20 years

after the mandate, how do you think the delivery of pharmaceutical services has changed?

IS10. In hindsight, what roles and responsibilities of the pharmacy profession have been most affected by the Pharm.D.? Which elements of professional practice have benefited from the degree change and which ones did not change as anticipated?

[The debate regarding the implementation of the Doctor of Pharmacy as the entry-level degree was accompanied by many opinions voiced in publications about the effect of the Pharm.D. on delivery of service. The six-year professional course of study was first proposed in 1948, and two years later the University of California was the first school to institute the entry-level Pharm.D. as its sole professional degree. Immediately following was the University of California San Francisco in 1954. Through the next three decades, the field moved toward the adoption of patient-centered practice as the philosophy of pharmacy practice, but the transition was not consistent across the country.]

**Seventh pattern: The success of the transition from product-based to patient-based pharmaceutical care is inconsistent throughout the U.S. healthcare system.** [Before WWII, the pharmacist compounded many prescriptions. The pharmacist's major function was to take herbs and add some chemicals, combining the raw material into a concoction for which the physician wrote out a recipe on a prescription pad. Respondent 8 explains that function was taken over by the pharmaceutical industry after WWII.]

***Theme: With the introduction of the Pharm.D., the role for the new clinically-trained pharmacist expanded rapidly in hospital settings.*** After the primary role of blending various pharmaceuticals into a prescription was taken over by the large drug companies, many pharmacists in the retail setting now were simply taking a piece of



paper they could hardly read and making sure that the patient got the dosage that the physician wanted the patient to take. In the 1940s, hospital pharmacy was not very well developed, although it had become more prominent by the time of the AACCP meetings in the 1980s. With the introduction of the Pharm.D., specifically what UCSF and the other programs that emulated them had done, the potential of the pharmacist to add real value especially in the hospital setting, was visible. But the value of the pharmacist role was not envisioned in the community setting. Respondent 10 commented on this transition:

The University of Michigan went all Pharm.D. 20 years before the mandate. It differentiated itself from a marketing perspective from other schools in Michigan, such as Wayne State University. There was a very large enrollment in the baccalaureate programs in pharmacy at UM. Being a research and comprehensive university, the decision was made to decrease class size and go all Pharm.D., with a clinical focus. I don't have solid data on where the graduates specifically went to practice, but would be willing to bet that a much higher proportion of graduates from UM ended up in hospital practice.

***Theme: The advancements in the delivery of services and the scope of practice are dependent on geographic location.*** In different regions of the country, particularly on the west coast which led the Pharm.D. movement, a significant change has occurred in the delivery of pharmaceutical services. By the mid-1990s some schools in the Midwest and in the Boston area also had committed to the Pharm.D. as the sole degree. The Pharm.D. markedly changed the status of pharmacy in California, but that is not necessarily true across the country. It is mandated in California that a pharmacist who fills the prescription must give advice to the patient. In Boston, hospitals and health systems are now beginning to put in job descriptions statements such as "Pharm.D. preferred or required." Respondent 2 summarized this geographic distribution: "The acceptance of the Pharm.D. has been somewhat based on geographic distribution. The Northeast was one of the slowest to make the transition."

[In 1998, the Pew Commission supported the goal that health professions regulation should be to establish standards that protect consumers and suggested this could best be accomplished if states enacted uniform scopes of practice for each health profession. The Pew Commission's work suggests that there is still movement and conversation about the professional scope of practice at the state level and the people that can influence changes are in the professions.]

***Theme: State regulations regarding the scope of practice of pharmacy are widely varied throughout the country and have a direct impact on the delivery of services.*** [In the United States, each state has jurisdiction over licensing of health professionals, establishment of the professional scope of practice, regulation of practice standards, and disciplinary actions against performance problems. The state regulatory agencies work together with educational accrediting agencies in the development of a health professions scope of practice.] The differences in state rules and regulations are dependent on the perspectives and perceived roles in the state healthcare delivery system. The most progress has been made in the laws at the state level that permit collaboration between the pharmacist and the physician [Respondent 10, 11]. Such regulations are usually accompanied by reasonable constraints in the way that they are written (but when available allow the pharmacists and physicians to get together in organizations where they know each other and gain confidence in each other). The whole idea of collaborative care is very effective and has been proven to help the patient save money in the long run. For example, in St. Louis if somebody wants to practice pharmacy in that metropolitan area (including Illinois), they have to have a pharmacy license in each state [Respondent 10]. A few states have enacted collaborative steps to enhance collaboration in the field of pharmacy, such as these bordering states (Washington and Oregon, Kansas and

Nebraska), but these efforts have been slow to develop. Respondent 10 explains one reason that states resist collaboration:

It goes back to the Civil War and states' rights. Each state wants to have their own ability to do what they want to do within their state. There are national guidelines that I guess are templates to work from that many states have followed, such as the flu vaccine or hepatitis. Those kinds of things at the national level form a template standpoint that have worked, but each state is always going to have their individual ability to license people that practice medicine, pharmacy, nursing, etc., within their borders. I don't see that changing simply because of the history and the way our country was started.

***Theme: There appears to be a relationship between licensure, state governments, and the protection of salaries.*** Respondent 11 suggested that every state legislature is a little bit different, but the politics of changing the scope of practice have been the same. Several respondents [6, 9, 11, 12, 14] noted that since the first legislature ever convened in the U.S., the individuals that advocate licensures have varied from state to state, but that all are from the *good old boys club*; we [Respondent 11] are going to control the number of practitioners so everyone can make a lot more money. We are not going to hand out licenses to practice freely, no matter what the profession is. Illustrating this political environment, Respondent 11 stated:

In our state, I would like to believe that we are much smarter than the rest of the world but we still have some of these scopes of practice issues come up. I was involved for a few years and experienced lobbying for the chiropractors objecting to the physical therapists' ads in the yellow pages and the physical therapists complaining about and lobbying against the chiropractors for the definition of physician. In addition, there were organized lobbyist groups that represented medicine that decided a long time ago that they would control nurses and the nursing profession. And now [there is] the rise of the DNP. The horse is out of the barn now and it is an evolving thing.

***Theme: One issue that makes pharmacy unique is that it is the only profession in which two sets of licenses are required: the practitioner who has the license and the space or facility in which the pharmacist works.*** The pharmacy products, specifically

prescription drugs, are subject to their own set of rules and regulations by the FDA and the respective state board. That really became complicated in the 1960s with all the drug abuse issues [Respondent 12]. Then you get the drug enforcement agency's account. At one time there were nine different government agencies that could have walked through the door at any hospital, come into the pharmacy, and poked their nose into the daily operations.

**Eighth pattern: Finances play a major role in changing pharmaceutical practice.** Chain drugstores cannot continue to grow the way that they have in the past 20 years; they cannot expand the drug product distribution. The big chains have set up units within their big companies to explore how to define healthcare reform to provide services as well as product distribution. The chain drugstores are experimenting with that and pharmacies are at the height of this experiment [Respondent 11]. It is going to take a long time.

There is a gradual change but there remains a strong impact by the national drugstore chains. The chain drugstore business model confirms that we have incentives in the healthcare systems today to dispense more drugs, not necessarily to get value. That is the orientation that corporations take because the bottom line in business is the cost-benefit. How much time for taking care of a patient with individual attention and how much is the reimbursement for that time? The majority of respondents [2, 3, 5, 9, 11, 12, 14] are convinced that we are getting considerably more compensation than we used to but we are not getting enough. Respondent 7 stated:

The national associations need to stand up and promote us. People have collected enough evidence to show the value pharmacists can do in saving lives and saving money. What we really need is a good television show that features a pharmacist out there saving lives.

***Theme: A primary player is the pharmaceutical industry.*** The drug industry continues to find ways to get its money and creates internal issues for providers of the delivery of medicine. When we [Respondents 2, 8, 11, 12] are talking about any hospital or community pharmacy, the largest financial item on the balance sheet is the cost of the drug products, which has hammered the pharmacy profession. As the healthcare and third party payer systems have changed, the dispensing fees and insurance reimbursement rates have continued to get constrained. Yet drug manufacturers continue to push for ways to maintain their profit margin. One method is to use their more extensible trade name to negotiate having the state government obtain rebates back to the states as long as you have physicians prescribe. Respondent 12 explains the complexity of the situation:

The latest news was just out in the last couple of days about President Obama, when he went after his Affordable Care Act to deal with industry to get more rebates back from them. But the pharmacy profession would and should not get involved in negotiating prices from the government or with the pharmaceutical industry.

***Theme: The business model of the chain drugstores limits the roles and responsibilities of pharmacists in practice.*** [Two-thirds of our pharmacists today are in community pharmacy, in drugstores, and the majority of those are chains. The chain drugstore has the business model built around distributing drugs and competition in that market is restricted to that limited role.] All respondents were in agreement that the business model of the chain drugstores is because the revenue stream still is dependent on prescription filling. There is no real significant revenue stream that pays for ambulatory care, particularly in community pharmacy; there is not revenue to pay for clinical services [Respondents 5, 12, 14]. In order to make a profit, chain drugstores have to do what their business model says and that is to sell physical drug products; and in order to expand pharmaceutical care services, they have to be in a position to get paid for that. Right now

there is no good model to do pharmaceutical care in community pharmacy.

The current community practice model is very efficient and effective in accomplishing the limited role of dispensing prescriptions. Respondent 6 commented that: “the American public, any place in the U.S., can get just about any prescription drug that they want within 24 hours. It is an extraordinarily efficient and effective system for distributing drug products.” The pharmacist controls it under the law but really just works for these chain drugstores.

The hospital setting is different. Respondent 14 noted that there was a report out recently by the Surgeon General talking about the role of the Pharm.D., which gave strong support for pharmaceutical care and allowing pharmacists to take care of patients and dispense drugs. Respondent 4 stated: “Pharmacy education has changed dramatically and now pharmacy practice is in transition; how long it is going to take is unknown.” The profession has thought positively about the trend toward patient care and has been pushing this for a long time. All Respondents were in agreement that, historically, pharmacists have always been overeducated and underutilized. Respondent 7 illustrated this transition:

Pharmacists have always been linked to the product. We are moving beyond selling drugs. Sometimes I am optimistic and sometimes I am pessimistic. Pessimism comes in at the whole healthcare system. It is already so expensive and to add another X number of dollars for pharmacy services, you get a lot of resistance.

Most graduates are in community practice [Respondents 5, 9, 12, 14]. That includes the vast majority who are going to practice in drugstores and do not practice the caliber pharmacy or the rigor of pharmacy that the pharmacist is capable of doing. So the majority involves dispensing medication, hopefully getting reimbursement and doing medicine-management therapy and helping patients with their medications.

There is really no incentive for chain drugstores to change their mode of operation so those individuals are probably over educated for that practice, but the Doctor of Pharmacy degree has accelerated the transition for pharmacy practice at a higher level, namely the hospitals. Respondent 14 summed up the situation:

Sixty percent of our graduates end up in community pharmacy, especially chain drug stores, which the majority of time is spent doing prescriptions and that is going to have to change. I am convinced it is going to change. I think it is changing rapidly as we speak. Go back to what the CVS people are saying they want pharmacists to do. I think it is all tied to the whole debate about transforming healthcare and the healthcare initiatives. I think there will be a significant change in the healthcare delivery system because we are legalizing many of our health professions as primary care providers. There is no way our medical society can manufacture or graduate enough positions to take care of 90% of the population. We have to look to other health professions and that is why I think pharmacy's decision to go to the Pharm.D. 10 years ago provides us with a workforce with young graduates who are capable of providing primary care in the community setting, especially in chronic care...[where they] are more capable of providing acute-care in medical clinics or where you expect to see practice.

***Theme: In the attempt to modernize the pharmacy practice from a product-oriented to a patient-oriented profession, one concern was how pharmacists were going to get paid for the advanced services.*** Several respondents [5, 10, 13] commented with regard to the compensation system, with Medicaid and private third-party insurance programs. The conversation of payment was associated with a commodity. Management of Medicare Part D opened the door for pharmacy to capitalize on that. The price of a drug was the cost of the ingredients plus a fee. Now that is being ratcheted down further and further. Respondent 10 said, "where and what is the future if it gets down to two dollars for each prescription, all you are worth is \$2.00."

***Theme: A limiting factor is that an organized system for compensation for services has not been established.*** [When the Healthcare Act was established, it was very contentious and is still being blocked. There was a movement toward reimbursement of

pharmacists for cognitive services, paying pharmacists for something other than what goes in a bottle and is given to the patient.] Several respondents [2, 5, 10, 13] noted that medication therapy management services became part of the conversation at the federal level, many of the pharmacy professional organizations, which were strongly independent, began to collaborate. Groups such as the National Community Pharmacist Association, the American Pharmacist Association, and the AACP came out with a positive, unified approval of identifying pharmacy in a different light.

The biggest asset is that those groups that were at loggerheads in the 1980s now realize that they can't survive unless they work together. They should have done that in 1989, but they are now and we [Respondent 10] are moving on, moving forward. Many respondents [2, 5, 12, 13] believe that pharmacists are still underappreciated by the U.S. healthcare system. The incentives to provide quality care and do it at the most reasonable price are all misplaced. For instance, the cost benefits of drugs and drug therapy have been analyzed, computed very narrowly and typically found on one drug regime versus another. There is no appreciation demonstrated when medicine is properly used. When drugs are properly managed, this decreases the amount of payment and creates a healthier person. In the current U.S. healthcare system, this approach does not provide incentive, nor is it factored into cost/benefit analysis. Pharmacists are involved in the process of ensuring that a prescription is not only the right drug for the patient, but also the appropriate dosage. An appropriate diagnosis becomes a different entity when you [Respondent 11] are looking at the appreciation (or, rather, lack thereof) for optimum healthcare demonstrated by the Blue Cross/Blue Shields of the world. Instead of making drugs cheaper and services cheaper, their emphasis on lowest cost medicines will increase the number of hospitalizations, necessitate more tests, etc. That is an example of



how the incentives are on the wrong side of what makes sense, particularly long term.

I [Respondent 11] would say that 15 years ago the only physicians you talk to that were supportive of the single-payer system were the ones who were 30-35 years old. There were not any physicians that were 50 and older who supported a single-payer system. They finally figured out that the system is not as easy as they thought it was. At the same time, because we have the Doctor of Pharmacy or a doctor of this or whatever, that does not ensure that all of these doctors can walk on water. So we need to make sure we pay attention to the human side of care. Sometimes just a hand over a shoulder of a patient is the most important thing one can do. Respondent 11 added, "I am a big advocate for high-tech care but I am a bigger advocate for high touch care." Respondent 7 illustrated the reimbursement dilemma:

The pharmacist still needs to go into situations that we know we can get paid. When I was in practice, the pharmacists made their money off of selling the product. We doubled the cost and that was what we got for reimbursement. Then some third party payers went to the cost-plus fee and kept ratcheting down the fee to the point where you have a very expensive drug and you are getting maybe two dollars fee out of it. ...[Originally] we give away our advice for free because we made money off of the product. If we can figure a way to sell our advice, some pharmacists have even opened clinics like this, where the patient comes in and they charge them on the basis of \$15-20 an hour so they can help them with medications,...kind of like a pharmacist program that we put together here at this university.

It is basically supply and demand. It is hard to put a finger on just where it came from but salaries went from roughly around \$80,000/year back in the 1950s, went up a little bit, and now we are looking at 100-120K for pharmacist salaries. There was a shortage of pharmacists and so the practitioners were getting high salaries. At the time, \$100K was a very high salary, higher than an engineer or any other graduate because the demand was high so we could raise tuition. The salary situation is the same now as it was then. The new pharmacist is being paid about the same as in 1990 [Respondents 7, 8].

Some people are saying that it is worth figuring out how to get reimbursed for what pharmacists are giving to the patient.

The reimbursement methods for hospitals are different for the pharmacy portion. The savings on drugs are not reflected in the “patient outcomes” that indicate saving lives, etc. So there is no incentive to change anything. Reimbursement still relates to the product. Respondent 9 shared this current news, “Today’s *Wall Street Journal* has an interview with the CEO of Express Scripts talking about the cost structure and the value of pharmacies dispensing and that sort of thing.” Respondent 11 expressed these thoughts:

There has been a 40-50 year struggle to present to employers that they need a public relations program. When the public goes to the local pharmacy, you cannot find or communicate with the pharmacist. You do not see them. There was one time where there was a Peoples drug store in Washington, DC. If we want to really change the way people perceive pharmacy, we need them to be present in the Peoples drugstore in the poorest parts of DC.

***Theme: The current third-party reimbursement model does not provide incentives for pharmaceutical care.*** There are other questions related to the acceptability of the Pharm.D. on services and the marketplace because no one has figured out a good way to pay pharmacists to do the things we want them to do and that they are prepared to do. The continuing big struggle is the difference between the distribution function of drugs in the marketplace and the provision of the Pharm.D. services [Respondent 5]. As newer and more expensive drugs enter, if a pharmacist cannot make money as a typical independent pharmacist filling prescriptions, that is a problem. More and more of the independent pharmacists are leaving and more chain drugstores are being established.

Several respondents [5, 8, 12] commented that, in terms of patient care or providing pharmaceutical services, it is difficult to see how a pharmacist in a work

environment that is built around efficient, cheap, prescription fees would work. It is designed to be a place for getting a lot of drugs to a lot of patients very effectively and efficiently, but it is not the place to get confidential health advice. To do that, they need to provide a consultation space, time for conferring with patients, and most of all, a scheme for reimbursement for those services.

### **Research Question 1c**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

#### **c. the interdisciplinary relationship of practicing physicians?**

IS11. Compare the status of pharmacy as a field within the hierarchy of the health care industry in regards to:

- i. salary?
- ii. prestige?
- iii. supply and demand?

IS12. How has the interaction between Pharmacists and other autonomous providers changed, e.g., medical doctors, osteopathic physicians, or dentists? Is there more of a partnership? Any conflicts?

IS13. Once the clinical practice of pharmacy was established as the professional philosophy, what type of strategic plan was developed to inform and educate members of other healthcare disciplines about the expansion of knowledge, skills, and abilities of the pharmacy profession?

IS14. Do you recall what opportunities and threats from other disciplines were presented during the decision-making process? What strategies were implemented to embrace the opportunities or counteract the threats?

IS15. Retrospectively, what are the trade-offs that have come from the transition to the Pharm.D? To what extent do you think that was recognized as being an issue at the time that the transition was first implemented?

[Literature on the Trans-theoretical Model (Kraft et al., 1999) suggested that fundamental barriers underlie a complex organizational change process, such as modifying the degree required to enter into a profession. One problem is that changing the professional philosophy does not guarantee that all stakeholders, such as other

healthcare practitioners, will embrace the necessary changes to transform the practice of pharmacy to match the philosophy. In the U.S. healthcare system, there is an increased emphasis toward inter-professional collaboration in health professions education and delivery of care. To ensure successful transformation of pharmacy practice, other health disciplines must accept that the practicing doctorate degree assures that pharmacists are prepared for educational and professional roles in other health science education programs and interdisciplinary practices.]

**Ninth pattern: Professionals in the U.S. healthcare system are strongly resistant to change and seek evidence-based research that a change is necessary.**

**With respect to how the other fields responded to the changes happening in pharmacy, evidence is growing that an interprofessional, team-based approach to patient care is the best practice model.** Many respondents [1, 3, 9, 10] believed that physicians are beginning to trust that the pharmacists know what they are talking about because the pharmacist is now capable of managing patient needs regarding interactions among complex medicines. Doctors are seeing through research and data that what the pharmacy profession has been saying is right. Pharmacists are able to speak in a language that the physician understands and, so, there is a lot more respect between physician and pharmacist over clinical applications of drugs. Respondent 5 believed that there has always been respect related to dosage, but the physicians historically felt they were trained to prescribe and the pharmacist was trained to dispense. Those were the rules and everybody should stay in their role. Doctors are starting to figure out that there are people who have the expertise to help them. There are still conflicts with older doctors who were trained in other ways. They don't want to move over and relinquish their authority, but some of them are starting to make that transition.

***Theme: The pharmacy profession did not have a strategic plan to inform the other stakeholders, but there is a constant, slow acceptance of the abilities of the pharmacist.*** All respondents concurred that there was no profession-wide accepted strategy for how to communicate these changes to the broader community of health professions, nor to the public. The thought was that, if the change was made at the educational level, the profession could wait to see if they (pharmacists, other stakeholders) appreciated it. Only then would the value of the change be known.

Over time, more and more schools, and then more and more students, were opting for the Pharm.D. degree. Clinical programs developed from the hospital side where they started back in the mid-1960s and continued. As these clinical programs became more wide spread, it became clear that hospitals were interested in hiring Pharm.D. graduates and not bachelor's graduates. Thus, this became an employment issue. Respondent 13 served on a Pew National committee in which multi-disciplines were talking about the roles of various professions in primary care and about workplace needs. By 1989, 18 schools were termed the "early adopters" of the Pharm.D. as the sole degree into pharmacy practice.

During the decision-making process on how to have a successful transition in pharmacy practice, the leaders did not look very far ahead. The members of AACP believed that pharmacists needed to be educated differently to provide better patient care outcomes, but did not focus on cross-professional team-based care. Many of the respondents [1, 2, 3, 5, 9, 10] indicated that they are passionate about this conversation now, both on a local and national level. The profession needs to reclassify pharmaceutical care and help universities become more cross-disciplinary in their teaching efforts. The concept of collaborative practice requires the whole healthcare system to undergo change.

Each health professional needs to step forward and be more involved in healthcare delivery as a member of the health team. That is where patient care is going to be, a team effort across professions [Respondent 14].

Yet, not all parties are changing their mindset to be consistent with the more extensive pharmacy education. There are some pockets where the pharmacist is paid to provide services but a very small percent. Illustrating this resistance, Respondent 4 indicated:

The AACCP strategic plan was that every school had its own strategic plan and it was reviewed twice a year and readjusted. We did reach out to other professions and we had nurses, physicians, audiologists, etc., come to our national meetings and talk about things that were happening in their profession and they heard about things that were happening in our profession. Equally important, the executive directors of the AACCP got together and had a lot of discussion.

The healthcare system and reform will require pharmacists to be more progressive. The pharmacy profession is working harder and more aggressively to obtain provider status [Respondent 6]. Each facility within the healthcare system must have the most efficient and most effective system for patient care and demonstrate continuous improvement. It is unreasonable to say that is how pharmacists operate and we are always going to do it this way [Respondent 8]. There is a constant search for a better way of improving outcomes. The outcomes are twofold: one is a patient-care outcome and the second is economic outcomes, but not at the expense of patient care outcomes. How do you structure this relationship among the intelligences that these individuals bring into the arena and actually set egos aside? What is it that this person or this group knows, what can they add, what value do they add to the position? If the position is diagnostician, they use a tool, they don't probe on the patient to get a diagnosis, they utilize MRI, CT, etc. Respondent 3 expressed these thoughts:

I did not think it was possible to be more resistant to change than the resistance I experienced in academia. But, having been an administrator in a different era, the healthcare system is so politicized, especially today, that I have little hope of seeing that change radically in my lifetime. That is the next decade. I think this is the most insurmountable problem and one that I certainly don't have the skill or the patience, nor did I ever have the personality, that would permit me in being successful at doing that.

Respondent 6 explained the role the pharmacist plays on the healthcare team. He makes clear that patient care is a two-step process; you have to have a proper diagnosis in order to make an appropriate decision. The second cannot be correct if you make a mistake with the first. Pharmacy can do an excellent job of prescribing medicinal substances but may not be confident in the skills of diagnosis. Pharmacists are experts at medications, the proper use of them, in combination with other drugs, with certain foods, with particular laboratory tests. Does the physician know the multiplicity of conditions being treated by several doctors starting with the general practitioner and multiple specialists, often in different subfields and treating different ailments? How can any one physician make an educated decision about therapy or inclusion of another chemical in combination with a variety of other things and be confident about that without asking someone who has specific expertise about these complex interactions, i.e., the Pharm.D. trained pharmacist. Respondent 8 explained how this situation is changing:

Historically, the limiting factor in delivery of services was [that] the pharmacist did not have the medical history of the patient. Now, most doctors have gone electronic so the prescriptions are either faxed or sent electronically. The patient's records are electronic, so the pharmacist can obtain a valid medical history of the patient, and that is part of pharmaceutical care. The primary limitation today is that the patient is sent to more than one specialist, which is happening more as our population ages. They end up with overlapping diagnoses and different types of diseases, but each physician is not aware of the other specialist's treatment plan. My opinion is that the patient should go to a single pharmacist who is aware of all diseases, diagnoses, and medications that are prescribed to the patient. We are getting closer, it happens more and more frequently, but before the 1980s it was rare.

***Theme: There is a trend in the healthcare delivery system toward a collaborative care model.*** Initially, a number of medical people strongly opposed cross-discipline collaboration. Physicians did not understand it. There were feelings that it could take away some of the doctor privileges or recognition. There also were financial aspects for the opposition because a number of physicians dispense drugs out of their family practices. Respondent 10 described the situation:

The thought was physicians now have these pharmacists trying to take responsibilities for some of my patient's care. That is my responsibility to take care of patients. And nurses, with the movement toward the nurse practitioner degree, are asking if the pharmacist is now going to touch patients? That is my responsibility as a nurse. So those conflicts existed within pharmacy and also existed externally with health professions. In my role, I viewed this as an opportunity but some older physicians and nurses thought they were trying to take something away from practice. Really we just want to help and benefit the patient. If we benefit the patient, it is going to help you and your role as the physician or nurse.

The pharmacists who are trying to change the practice are working with other health professionals, a nurse practitioner or primary care physician, and are really excited about it. Many physicians are relying on the Pharm.D. to monitor the drug therapy, especially younger physicians. Respondent 3 shared a true story that emulates the situation:

A physician got a call at home one night. He had a pretty sick patient with kidney problems. He prescribed an antibiotic. Anyone else would respond to this particular antibiotic and it would be effective on the disease but it was not working on this patient. The resident and the pharmacist on call conferred and altered the dosage because they understood the doses and type of antibiotics that were best for this complex situation. The next morning the doctor came forward to the pharmacist's office, really mad, and said that no one changes my doses and swarmed all over this person. Later in the day, the doctor was big enough to come back to the person and said I owe you an apology. He said my dose was way under where it should be and yours was right on the button. The blood levels for that patient are exactly where they should be.

***Theme: Many respondents have confidence that physicians will rely more and***



*more on the information from the pharmacist.* This happens a lot in hospitals and in places that are organized that way, such as the Indian Health Services, Kaiser Permanente, and situations where the professionals are equal partners [Respondents 4, 10, 11]. In these circumstances, the professionals are all trying to find a solution to the same problem, the patient's problem. Respondents provided examples of collaborative models that are being set up in situations like the Rocky Mountain health plans in Grand Junction, CO, and Group Health of Puget Sound in Washington State, in which the reliance is upon the pharmacist for medicinal therapy as an interdisciplinary member of a team with physicians and nurses. It does not happen as often in the community setting where the patients are getting their prescriptions from the chain drugstore and going to a private physician but it does happen.

*Theme: The changing landscape in healthcare required a team-based approach, and the pharmacist was the best professional to manage the drug therapy.* Physicians know a lot about the 25 drugs that they prescribed; but, as a rule, they did not know several thousands of drugs that were available. Patients were seeing specialists who gave them other drugs and they would have complications from drug interactions. Pharmacists were capable of being informed of all of the drugs, all of the complexities, and, especially, the possibility that it would be achievable to tailor a drug for an individual.

The innovators and leaders said pharmacy could do much more than it is currently doing. Pharmacists need to be much more involved in the outcomes of drug therapy intervention, especially when there is an error, mistake, or the potential for a mishap. In the 1970s, pharmacy students were being taught not to speak to patients or how to avoid speaking to patients. Respondent 13 shared thoughts on the diversity of pharmacy

practice at the time:

In the summers, I worked for a pharmacy in a rural community. They were taking care of the whole community. There was another pharmacy in town, but not much in the way of physicians. They kept records on 5x7 cards. If someone needed something, the pharmacist would call the physician and tell them what to prescribe over the phone. The pharmacists would do refills and make decisions like that. They were really doing patient care back in 1970 in the community settings. Not as formally as we do now.

There were people, primarily in education, who were highly visionary. Many understood that this, the chain drugstore dispensing prescriptions, was not the way pharmacy should be practiced. Respondent 13 continued:

I also worked at a chain drugstore where the clerk sold the drugs to the patient and the patient really couldn't talk to the pharmacist. They had to stand on their tiptoes, over the swinging door at the end of the counter, to take a peek at the pharmacist.

**Tenth pattern: Most patients need drug therapy and many physicians, nurses, and other health professionals are recognizing that there is somebody on the team who has expertise about medication therapy and not diagnosis.**

**Understanding of the competencies and skill set of each individual on the interdisciplinary team needs to occur at the educational level.** The respondents unanimously agreed with the idea is that it is great that the pharmacists know more than the physicians about drug therapy, because if the team is going to be successful, we need to use the skills of each and every person on the team. This raises the question of who is in charge. Many respondents said that it depends on the situation. A hospital pharmacist noted, "If you have a patient that needs to be anti-coagulated and the physician does not have the skills to do it, well the pharmacist had better be in charge if you see what I mean." Respondent 10 put the collaborative care concept into perspective:

Whenever you have a team, whether it is a team of health professionals, investigators on a research project, or whatever, there has to be some kind of

hierarchy. I mean you have got a doctoral committee and somebody is the chairman of the doctoral committee. You have to work out who has responsibility for what and I think that is really the basics for all these collaborative tracks. As we start moving into new territory, where you have pharmacists that are coming in and, not only through their education, but by their behavior and by what they know and what they can do, they are readily recognized by physicians and nurses and everybody else that there is somebody here that knows what they are talking about with pro-therapy and drug management.

***Theme: Pharmacists lack the skills in physical assessment that are necessary***

***for patient diagnosis but are experts on the drug management of disease.*** Several respondents [5, 8, 14] explained that, at the school with which they are affiliated today, the curriculum has a physical assessment component, but they are hardly ready to practice it. The students learn some skills in the first and second year of the program, but other than maybe taking a blood pressure and vital signs, they get very little experience. To become proficient at physical assessment it takes practice, practice, practice [Respondent 8]. There may be some exceptions out there, but they are rare.

Pharmacists do not have the skills that the caring professions, such as nurse practitioners, have to assess the patient's problems. Once the patient is diagnosed, pharmacists have the skills and education to manage a chronic disease state such as diabetes, hypertension, or asthma. Those situations are going to increase. Many pharmacy programs do not teach a strong physical assessment component or create the image that here is a practitioner who is great at physical analysis and has this ability to manage or take care of problems. Especially at the chain drugstores, they don't put pharmacists in as a practitioner. Respondent 3 defined that the role of the pharmacist is evolving toward:

Our role is to [be] as efficacious [at supplying/managing] drugs at the lowest cost to that patient in a timely manner. We have been able to prove this in hospitals..., talking to patients to understand the medications, what goes on with that medication, and what they should be experiencing with the medication instead of just being told by the doctor or the nurse.

***Theme: One way to change the face of a profession is to educate health professionals together, in a collaborative environment.*** Students from different disciplines would obtain a much clearer sense of what the contributions of others on the health professional team can be. Respondent 6 illustrated this with a personal story:

My physical therapist is my best friend. I am almost 80 years old and how in the world would I exist without my PT. How could I hike up mountains? My PT expects to see me at least once a month. My PT is extremely well educated and understands what is going on. I would have no qualms whatsoever if this individual were Dr. Jim instead of Jim.

Stakeholders in academia are talking increasingly about inter-professional education. Every school is supposed to have some kind of program that involves medical students and pharmacy students working or talking together for discussions on how to treat patients [Respondents 3, 9, 11]. That will produce change over time. There is more team-based education, with pharmacists joining physicians and nurses on rounds and similar activities, so when they graduate they are accustomed to working together. The other thing that is happening is that more and more people take residencies and are going to a higher level of clinical practice, working in situations where physicians and nurses are trained [Respondent 4]. They see the knowledge the pharmacists have and, when they graduate, they want to work with someone with the same knowledge. In addition, organizations such as Kaiser Permanente have pushed for inter-professional care [Respondents 4, 11, 13]. This is much better than it was 5, 10, or 15 years ago. This will continue to evolve and improve.

In education, conversation about inter-professional care revolves around the didactic portion of health professions but there is a lot more smoke than heat right now because there is so much to do. Everybody talks about it, we [Respondents 3, 4, 10] have talked about it for 40 years, and we are making progress, but boy is it slow! This creates a

sense of cynicism; will it ever be accomplished? When you have pharmacy students and medical students taking the same courses in pharmacology, there is an opportunity on these campuses where you have both types of training, didactic and clinical, with other allied health professionals. Students respecting each other and being educated together make a lot of sense. Respondent 3 illustrated:

When we create an experiential practice site, we put a pharmacy clinician in and give them a year before they have any students to train. The institution comes up with the office space. These people give their time to the institution by helping the doctors and patients in that year begin to understand the pharmacist's worth so they can be an important part of the team. So when the students arrive, they are already looked upon as professionals.

It is best to have the young men and women on the healthcare team be in a learning environment where they are associated with other professionals. "We want the other professionals to walk in there and say the words *my clinical pharmacist*"

[Respondent 6]. The students have more confidence because the medicine questions are being asked of the clinical pharmacist. Training with the medical students is key, and when they get out into practice, the new MD wants to know where the pharmacist is.

***Theme: There are more opportunities for the disciplines to be educated***

***together.*** There is a huge difference in the education process for medical doctors, nurses, and pharmacists. Medical and nursing education focus primarily on diagnosis; there is not a great deal of medicine in their training. Respondent 4 suggested that the pharmacy school curriculum does not spend much time on physical assessment and it is not like the nursing profession or any other caring profession. More education on the ability to diagnose is necessary for that to be a part of the pharmacist role. The pharmacist can present information to the physician that may change the diagnosis, but they are not trained in the evaluation process that leads to a diagnosis.

A lack of knowledge by most people in the healthcare system exists concerning all the drugs. The physicians know the drugs that they prescribe, the ones they were trained with in their residencies and internship programs; but they do not know anything except the basic facts. If you asked a physician the dosage forms, they would say go see the pharmacist [Respondents 5, 6]. At most institutions the disciplines are not being educated together in the basic sciences, but they are increasingly being educated together when they make their rounds, on clerkships, and on the clinical rotations, improving the respect between disciplines [Respondents 7, 11].

Many chain drug pharmacies now have nurses associated where you can get your flu shots; you don't have to go to the doctor's office anymore [Respondent 4]. The reason nurses are on board is primarily to give injections. Pharmacists are not trained to administer drugs directly, and nurses are there if something should go wrong, trouble breathing for example. Pharmacists are not trained to deal with those emergency type situations and the nurses can triage. The main point is that there is an overlap and should be more respect and trust amongst the three groups.

Respondent 10 commented that he always wanted to look at how the ACPE agenda was going to affect the most important person in all this, the patient. He noted that studies based in the hospital settings report that, if a pharmacist rounds with physicians there are fewer drug reactions, fewer medical errors. This research documents how working collaboratively can benefit the common good in general and, most important, the patient. Missouri has been one of the leaders in getting this collaborative model into play. Working within a cooperative environment allows the input of the pharmacist working with other health professionals for the betterment of the patient.

Although most of the respondents saw the Pharm.D. in a positive light, there were

a few outliers that never supported the societal need for the Pharm.D. Respondent 12 illustrated this oppositional view:

I still have one or two faculty here, one is retiring this year that is still in mourning that we went all Pharm.D. While I know he is a Pharm.D., he has been here 36 years and was one of the first Pharm.D. faculty hired here. He has never really accepted the fact [that we went all Pharm.D.]. He still thinks that it would have been better for society if we didn't do it. He felt the quality in the post Pharm.D. program and the types of students coming back for the Pharm.D. were really focused and passionate about patient care and changing practice. He felt that there was not a societal need for all of our students to be Pharm.D. because they would not be able to utilize the training that they would receive here in patient care when they left to go out and work.

#### **Research Question 1d**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

##### **d. societal and economic landscape of the healthcare industry (cost-benefit)?**

IS16. How does the change to the Pharm. D. serve the greater good?

IS17. Think about the strategic plan that the Pharm.D. represented as a policy change. Retrospectively, to what extent has the “turf” of the healthcare fields changed due to the implementation of the Pharm.D? How much did the balance of power between healthcare professionals actually change? How much did the perceptions of prestige, professional scope of practice for pharmacists actually change?

IS18. What is your perception on how the Pharm.D. is viewed by the general public? Do you think that the general population is familiar with the advanced knowledge, skills, and abilities of pharmacists?

IS19. What is your sense about the public's perceptions about the prestige of a Pharm.D.? The public's sense of advanced degrees and the people who earn them? The effects on society as a whole?

IS20. What is your perception about society and the need for more classifications of credentials or degrees?

**Eleventh pattern: The Pharm.D. has resulted in a gradual change in the practice and professionalization of pharmacy and the concomitant views of society.**

Right before the Commission to Implement Change in Pharmacy Education started meeting, the AACP made a very strong case that pharmacy's value to society would be

greatly increased if pharmacists were capable of providing patients with pharmaceutical care. Respondent 8 pointed out that the only way for pharmacists to prepare for the responsibilities associated with pharmaceutical care was more clinical training. The only way to get more clinical training would be by putting more time in the educational process.

A fundamental question before the field is what should the pharmacy profession be doing to take care of patients at every single practice setting? Respondent 12 said that he tried to get students to write a paper that describes the professional role, set of functions, practice activities, and job descriptions of what they visualize themselves doing in practice before they graduate. Articulating what their practice should be and successfully achieving that would provide a strong impetus toward changing the overall perceptions of the professional role. Engaging the student in and about the profession and related issues, both nationally and state level, could have far-reaching consequences.

***Theme: One of the underlying reasons for the transition to the Pharm.D. was that pharmacists wanted more responsibility, but there is a difference between increased responsibility and autonomy.*** Several respondents [1, 6, 13, 14] commented that one of the benefits of this transition is that Pharm.D. graduates have more of a professional attitude and appear to be satisfied with their career choice. Respondent 12 explained:

I believe very strongly that pharmacists have to be in a collaborative environment. We cannot provide the best patient care by ourselves, not should we try to do it by ourselves. I think it is dangerous for nurses, physicians, or any other discipline to try to do everything. There is a point when they are getting out of their boundary levels. Doctor of pharmacy, doctor of physical therapy, doctor of nurse practitioner...[T]hat is why I don't think autonomy is the way to go. I think we have to have respect for each other. I think we have a long way to go, but everybody is on board with it.



When students come out, they have worked in several different environments for a year of experiential learning. The rotations add maturity as the students continue to grow.

When they return for graduation, they have a sense of what they want to do, they understand what they know and don't know; and, most important, they are prepared to interact with other professionals to defend their position for the benefit of the patient.

Many graduates finish the Pharm. D. and continue on to residencies, add an MBA, go to medical school, while others go into practice as an expert generalist.

***Theme: Pharmaceutical care services cannot be forced upon the public, but take a slow, steady change in perceptions and expectations of individual patients.*** In a community, pharmacists are found to be high on a list rating trustworthiness and answerability. Respondent 1 noted that surveys have shown that people today know to talk to the pharmacist about drug-related concerns. If we asked whether all people in the community appreciate the pharmacist, probably not. People generally do so when there is a personal connection; a pharmacist has done something spectacular for a person's parents or somebody in that family. The population is becoming quite knowledgeable about their conditions and diseases, but some of it can be very confusing and they don't understand it. Respondent 4 illustrated this with a story:

I am playing Betty and I am talking to Mary, my neighbor.  
Mary, you know I was in to see my pharmacist the other day and I brought in this particular prescription that is to control my blood pressure. I needed a new prescription and I went to Doc Smith; he wrote the prescription and I brought it to my pharmacist. He took a look at this and said, you know you really shouldn't be taking this particular type of antihypertensive medication right now because this could cause some serious interactions. It could put you in the hospital and let me call Doc Smith and see if we can work out something that might be better for you. The neighbor says, "Geez, you know my pharmacist never says anything like that to me about anything. I go in there and ask the clerk at the back of the supermarket if my prescription is ready and she gives it to me. I give her \$487.40 and go on my way. I don't even know the name of the pharmacist".... This change occurs in a profession and it is not on the basis of academics.

Respondent 8 referred to several focus groups of patients, put together by pharmacist associations and other state organizations, that were gathered to discuss various issues and promote literacy, especially with the aging population. Many patients obtain information on health care and drug management off the Internet and are misinformed. The purpose of these focus groups is to share experiences, referrals. Most importantly, these gatherings have been a powerful opportunity to inform the public that they can go to their pharmacist for help with their medications and healthcare needs.

***Theme: When opportunities are present for pharmacists to practice to their fullest potential, society will benefit as a whole.*** Respondent 3 noted the root question as it relates to how to deal with this issue: “Do you wait until there is a clamor on the paths of society that demand pharmacists take a far more active role? Ensuring that we are getting the best possible benefit out of the therapeutic miracles that are available today in the form of new drugs. Or do we go ahead and by showing patients what pharmacists are capable of doing, let them make individual decisions?”

The majority of respondents [1, 2, 5, 11] were aligned with the individual philosophy that the pharmacy profession has been good to them. Many strongly believe that pharmacists have been good to patients and community. And many believe that they, as an individual, have been good for the pharmacy profession.

***Theme: Opportunities to practice pharmaceutical care are still in their infancy.*** We [Respondent 3] can do all of this training but we are going to have to take full responsibility of presenting to the public at large what these new trained pharmacists can do. This is a process that occurs over time, through experience. Most consumers do not have a clear sense of the capabilities of the pharmacist in helping them retain or regain their health, although a far larger percentage of today’s population is aware of what

pharmacists can and are doing to achieve those ends. That was not the case in 1992, just 20 years ago, because there are far more practitioners doing those things and they can do it because they have been well trained to do it [Respondent 5]. This is how the face of a profession is changed. One element of professionalism is that, when a profession expands the scope of practice, the process occurs through immersion. The transition of pharmacy practice from product-based to patient-based has been slower than anyone imagined, but it is happening [Respondent 2]. It is happening because of well-managed drug therapy.

Several respondents [2, 5,11] believe that if community pharmacists are given the opportunity, they possess the capability and are doing a good job providing clinical pharmacy services in the community. For example, the general practice of pharmacy, which is not primarily urban, is similar to chiropractic in that if you would go to a town, say 3000 people, there would be a pharmacy and there will be a chiropractor [Respondent 2]. The idea of increased expectation of the pharmacist and practice, whether in a small town or urban city, comes from the subtle recognition that, if more accessible, people will ask them questions and trust them. This changes slowly.

***Theme: The pharmacy profession, as a whole, has not been proactive in public relations. The health literacy of an individual seemed to be directly related to personal interaction with a pharmacist.*** Those who have experienced problems with their medication or have multiple diseases or complications have seen both the hospital and community setting where a pharmacist has really helped them with a dosage problem or drug interaction. That is where the public relations happen, with referrals [Respondent 11]. The public is becoming aware that the pharmacist can play an important role in being a problem solver.

[Health literacy is a major problem in the U.S. It impacts seniors in our

community. It impacts those who are not well educated or who do not have the advanced degree in related fields. There are so many people that do not understand basic English or cannot read.] We [Respondent 2] need to go out and give patients a sheet of paper that talks to them about the drugs they are supposed to take, and when you think the job is done, you have to be there because they need the support. Respondent 10 noted that many of the things that have been done by the U.S. Public Health Service related to health literacy have been by utilizing pharmacists and promoting the intervention with the patient's drug therapy. You can do all the right things from what you do as a profession, the preparation of the product, perfect education, but if the patients are not their own self-advocates, all of what you do is really for naught. The way we [Respondent 10] talk to patients in the health professions, we lose communication through phrases such as HMG inhibitors; but if we communicate that this drug is going to help you control how much rubbish is in your bloodstream, most people might be able to understand that. Some people in the profession are critical of current practice because we don't help people understand what they need to do to speak up, to be participants, to be active in their own healthcare.

Healthcare provision is an interesting phenomenon. It would be interesting to investigate why Walgreens has made the decision, at least in some of their stores, to end up changing the layout so that pharmacists are actually talking to and interacting with patients. Several respondents [5, 9, 11] surmised that this was because they are seeing a need in society. There has been a lot of effort on the part of the pharmacist, organizations that represent pharmacy, and individuals who think outside the box to increase appreciation of this fact. Consequently, these changes are beginning to resemble forward-looking models of patient drug management with the pharmacist highly involved. These

changes are illustrated by Respondent 11:

Some of it is just because pharmacists are underappreciated or undervalued but I do think it has changed. I like to describe the situation as we still have a long way to go uphill to reach the deserved stature in the healthcare world. When I look back on where we were 5 years ago, 10 years ago, or 20 or 40, we have come a long way to ensure pharmacists have a much higher role in the military and in the U.S. healthcare system.

Respondent 9 illustrated the opportunities for the young graduate:

We have been pushing for healthcare reform and we have to keep pushing because it makes sense. I think the pharmacists who want to practice at the top of their skills and [utilize their] holistic [training] are willing to move to rural communities [where they] can find a very rich environment and certainly we have graduates that have done that. It is not necessarily the underserved communities but sometimes quite well off communities in urban areas where patients are willing to pay for that kind of stuff out of pocket.

Respondent 3 added to these comments:

Some graduates have a harder time taking a practice preparation degree and incorporate that into his or her mode of work. Basically, some graduates look for work in the wrong places.

## **Research Question 2**

### **What is the transferability of an entry-level clinical doctorate related to professional opportunities?**

IS21. What is the transferability of an entry-level clinical doctorate related to professional opportunities, in theory? and Empirically?

IS22. What opportunities have evolved to allow the pharmacy profession to meet more effectively the healthcare needs of society since the Pharm.D.?

IS23. What are your perceptions about how the Pharm.D. has enhanced the professionalization of pharmacists? How? Why?

IS24. The decision to transition from a master's to a clinical doctorate begins with the internal decision and a strong rationale by the profession that change is warranted. What are some of the external forces that are behind the progression of the clinical doctorate as an entry-level degree that pertain to all other disciplines that are undergoing the same transformation? Based on your retrospective, what are the trade-offs/conflicts that other disciplines may face?

IS25. Inevitably, policy change leads to latent and unexpected developments.

Retrospectively, what do you think was the biggest surprise that resulted from the change to the Pharm.D.? The biggest disappointment?

IS26. The conversation of the clinical doctorate is occurring on a global level. The UK and Australia are experiencing their own transformations within health professions. Was the impact of the Doctor of Pharmacy on the professional on a global level discussed during the decision-making process? Considerations such as the equality of the scope of practice from country-to-country, educational requirements, licensing processes, etc.?

IS27. Can you think of anything else that might be relevant? Anything on power? Backlash? Positive effects? Other?

Questions related to the transferability of the entry-level clinical doctorate focused on professional opportunities available for the pharmacist in the current marketplace.

Most respondents believe the options for pharmacists are expanding with the new knowledge and skill base. Respondent 9 explained that, when you look at a pharmacy degree at the science level, it is almost a dual major in biology and chemistry. Then you add to that the health related information, therapeutics, and everything else. In addition, a pharmacy student will have been required to take courses in management and public health. All of this overlies pre-pharmacy requirements that are at least two years and for the most part three to four years of general education.

**Twelfth pattern: The Doctor of Pharmacy is well prepared for a larger area of professional practice and related careers, such as the pharmaceutical industry and prescription development.** These graduates bring pharmaceutical skills related to formulating dosage that are invaluable in the industry [Respondent 8]. You have pharmacists in the medical services industry, both the state and federal governments, and in health departments, talking with physicians and policy leaders about new drugs.

**Theme: Opportunities are expanding in hospital and community settings.** Job offers go out saying Pharm.D. or experience in hospital setting. A B.S. pharmacist that

never worked in a hospital setting would not qualify for this job. We [Respondent 3] are seeing Walgreens, Safeway, and other chain stores put in clinics with a Pharm.D. and DNP; and the Pharm.D. is doing the counseling, while the technicians are actually filling the prescriptions. Respondent 3 explained:

It can happen when given the opportunity, which is key to this, because a lot of pharmacists don't, but when given the opportunity to allow the pharmacist to sit down and talk to the patient about the medication the patient is so better about compliance and the doctors in the community like it. But if they are not given the opportunity and if they just sit there and do what they always did, and some pharmacists are happy to do that....I say "lick and stick."

***Theme: Pharmacy is a huge industry and Pharm.D.s are highly sought today***

***throughout the field.*** Biotechnology companies that are conducting clinical studies are hiring pharmacists as the head of the clinical pharmacology department, a position historically held by medical doctors [Respondent 5]. The complexity of clinical pharmacology has evolved to the point that the regulatory agencies require these research companies to have the Pharm.D. because they feel it is important.

**Thirteenth pattern: There were external forces behind the progression of the clinical doctorate in pharmacy and other professions that are contemplating the transition may want to address these factors.** Many respondents [5, 9, 10, 13, 14] were cautious about giving advice, but they voiced the concern about trying to figure out what has been done, what is relevant and what is not, when something is new. Respondent 10 said that the school of nursing has called upon the school of pharmacy from time to time about problems that pharmacy ran into and that the nursing school seems to be running into the same kinds of problems. The school of nursing has determined what exactly they are going to do, so maybe they can learn from the mistakes and successes that pharmacy went through.

***Theme: The respondents perceive this transition to be successful in pharmacy because all stakeholders were involved.*** The leaders in the four key stakeholder groups took time to meet with all associations, create standards, and obtain advice, reactions, and comments from all interested parties. The respondents stressed the importance of involving people who may not be viewed as allies, agreeing that all sides were gathered together to talk freely and openly, without reservation, without any kind of bitterness or hostility, to open and air out the issues. As people and stakeholders began to see what was and what was not happening, they bought into the idea. A few did not fully buy in to the mandate but were required to comply with the new regulations [Respondents 12, 14]. The pharmacy leaders planned to take a long time from the beginning because they wanted all groups to have ownership. Respondent 4 said, “We wanted all stakeholders to buy into it before we finalized it.” Respondent 10 illustrated the importance of open dialogue:

I think it is really contingent between physicians and nurses. I find it unbelievably positive that the nurses have gone ahead without physician support. I think that on the very ground level of this you need to pull together and really talk about what the issues are. If you are not one to agree with each other, get various components together, get the nurse practitioner, county employees, B.S. nurses, and professional associations involved. And by all means bring in leaders in the physician domain. You might leave a discussion room with 80% agreeing and that is better than leaving the room with 100 people with their own ideas of what they want to do and how they are going to fight this.

***Theme: The respondents agreed that other professions might want to take time to learn this process, because this process has worked well for pharmacy.*** It has been argued in many graduate programs that pharmacy can be used as a template. Many disciplines are saying we [Respondent 3] want to do what pharmacy has done. Since pharmacy moved to the practicing doctorate as entry into practice, the profession has been able to transform the practice of pharmacy in only a decade. There is still more



work to be done, but the accomplishments have been impressive. It is important to read what is available in the published literature about how this process worked, learn about the tasks and the steps it took to ensure that the key stakeholders were knowledgeable about what the profession was trying to do. Hopefully, what we [Respondent 6] were trying to do had a positive influence on the field.

***Theme: If the various stakeholders in the educational institutions successfully implement change in the educational requirements, the graduates of the Pharm.D. programs will have a ripple effect through the rest of society due to their upgraded capabilities and professional practice.*** As schools of pharmacy change curricula, so too will professional organizations and their bodies. Broader changes will occur through the efforts of promising practitioners who have come through the more intense educational process. Respondent 4 illustrated the importance of the change process:

It will be a slow evolutionary change; it will not be a dramatic painful change. Anybody who wants to accomplish this, who wants it to happen in 2-3 years, I am talking about public acceptance and all that stuff will be grievously disappointed.

***Theme: It is important for a profession to articulate clearly what the difference will be when the professional doctorate program is implemented and how that will translate to better outcomes for patients.*** Respondents used nursing as a profession that needs to address this as part of the larger policy discussions that accompany changes in required credentials. Respondent 6 noted:

Nursing has never had a single accreditation program. They have a hodgepodge of nursing credentials; diploma graduates, baccalaureate graduates, graduate degrees, Ph.D. Now they are going for the DNP. In our case, pharmacy, we have always had, from the standpoint of pharmacy education, one comprehensive, across the nation, accredited degree. It might be a four year degree, 1+3, 2+2, etc. and now we have the 6-year Pharm.D. degree as the entry-level, but we still have that consistency that nursing does not have. They are deciding if they are going the direction of the DNP but they have all of these other levels of [the] nursing track that they are dealing with and I don't see them addressing those. It is another

level. What they are anticipating is that the master's program for nurse practitioners or whatever will be replaced by the DNPs. The question is will their credentials be consistent on that certification and will all of these small institutions be able to move in that direction.

***Theme: The intention of the profession to transition to the practicing doctorate should be to establish a role as part of a collaborative team with other healthcare professionals, not increase the professional autonomy.*** Respondents 3, 5, 13 focused on making sure to be out front on this and to be careful to look back. If there is nobody supporting you, such as other key health professions, the intentions of the change need to be reevaluated.

**Fourteenth pattern: The biggest surprise from the establishment of the Pharm.D. as the sole entry-level degree has been the unexpected rise in pharmacy schools.** At the time that pharmacy went all Pharm.D. in the early 1990s, there were 74 pharmacy schools. The general feeling at that point was that pharmacy educators were going to have a difficult time staying even in terms of the supply of pharmacists. There were certainly those that said as soon as you go all Pharm.D. the demand is going to go down and there will not be as many applicants in pharmacy schools. It was even suggested that the standards for new students would have to be lowered. In fact, the Pew Commission forecast that there was no need for nearly as many pharmacy schools, projecting that many pharmacy schools should close [Respondent 5]. But none of that happened. We went from 74 to 125 schools, with most of the new programs in private institutions. All respondents indicated that this surge in the actual number of both pharmacists and schools was clearly unexpected at the time that the changes were being contemplated.

***Theme: During the transition period, leaders thought that this educational***

***change would decrease the number of applicants. This turned out not to be true.***

Initially, many schools thought it was not okay to expand to a six-year program, and they would just do something else. At the time, there was a shortage of pharmacists.

Respondent 9 explained what happened: There were more applicants and new schools began to open. So basically, this decision has brought more people into the profession.

Respondent 3 explained the scenario:

We have seen an increase in the number of pharmacy programs, especially in private schools. There is still a demand for pharmacists and the schools see a way to make a dollar. Our state program is the lowest tuition in all comparative schools in the west region that are close to us. A lot of the private schools have tuitions double ours.

***Theme: In addition to the increased number of schools, the class size has grown as well.*** ACPE maintains statistics on the number of graduates before the mandate and after the mandate. These data, together with enrollment figures, will provide information about how many graduates there will be in three to four years from now [Respondent 5, 9, 12]. That number is quickly going to double from the number of pharmacists that graduated 10 years ago. Respondent 2 shared these thoughts regarding the number of pharmacy students and programs:

Are we getting to the saturation point regarding the number of pharmacy schools and the number of graduates who will be entering the marketplace? Do we have access to sufficiently qualified alchemy, particularly those with a Ph.D. in sciences that can teach these students?

***Theme: There was the perception of uncertainty regarding the quality of some of the new schools and programs within existing schools that have been started in the past 20 years.*** The pharmacy schools that have opened in the last 15 years are dramatically different from the existing schools because they tend to be in schools that don't have a history of doctoral education, and the culture of the school may not reflect

graduate education. Respondent 9 emphasized that the culture of the school is important for success, illustrating with this point:

Many of the new private institutions did not have any doctoral programs at all. Some of which only had baccalaureate programs besides the pharmacy school. So that was an unintended thing. There has been a fairly substantial amount of opinions. My take is that we don't have good information about the quality of graduates because we cannot measure the quality of anything in education.

Respondent 3 noted that all the things that go into a college learning experience have undergone radical change by the ACPE for the past 40 years. The issue of what we [Respondent 6, 14] call the product at the end of the training has been hotly debated. Because there was a shortage of pharmacists for a while, colleges got into the business of educating pharmacists. They are using the student loan initiative in order to do this, and now suddenly some of the pharmacists are not finding work as easily as they may have five years ago. Respondent 14 shared these thoughts:

I think we have too many pharmacy schools now. In May, we graduated 119 students and on the day of graduation we still had about 26 students who did not have a good job. Now, some were waiting for the perfect situation, did not want to relocate, and such. There are many rural and inner city urban areas that have a void.

Many respondents [2, 3, 9] expressed apprehension because there is a different philosophy in most of the new schools that are being developed that may do harm to the profession. These new schools are not research focused and they hire people who basically do not want to do research. This may be shortsighted. The ACPE accreditation standards and guidelines do not stipulate that faculty need to be scholars, rather than focusing only on teaching; but it may be doing a disservice to the profession when that happens. Respondent 8 illustrated this concern:

They do not have the most respected deans and/or a large number of faculty. Some don't have a basic science program, one of the things that I was a very strong advocate for on the commission. I felt the science education must be

expanded as well because a pharmacist graduate needs to know all the drugs of the day but they don't know the drugs that will be available 10, 15, 20 years from now. At one time you could ask a pharmacist if they know all of the drugs they were dispensing and they would say "yes." That is not true today. So you need to know the science upon which the drugs are derived in order to know how the new drugs are fitting into the overall disease process and you need to have a strong basic science foundation in order to do that. I question whether some of these new schools that is happening. Visiting professors, people that [in] come in and give a few lectures and go back to their main institution, give a lot of their basic sciences. Accreditation is supposed to take care of that, but I don't think they do a good job.

On the other hand, most programs that were already established at the time were successful in adding additional faculty, an additional year, and additional training so that, overall, the Pharm.D. is a much better educated pharmacist than was the baccalaureate [Respondent 8].

***Theme: The largest increase of new programs has been in private schools, many without the established culture of doctoral or health professions education.*** There is still a demand for pharmacists, and schools see an opportunity to make more revenue by establishing a new doctoral program. Respondent 2 illustrated this phenomenon:

Twenty-something institutions that have been ready in their minds to entertain the idea of starting a pharmacy program have called me up [on this] and my little tagline for what I do as a consulting practitioner is "make the right decision for the right reason." I help them understand what is involved not only financially, but institutionally to incorporate a pharmacy school into their offering.

I ask the question, what prompts you to want a pharmacy school? And it often comes down to that they have been searching for ways to increase their institutional perception, the profile of the place. Most of these have been traditional liberal arts schools and by traditional, I mean 3000-5000 students who have no graduate education. Many of them have no other health profession schools. So they are seeking to improve institutional image, which is a very legitimate argument. It can be defended because they assume that it will increase the undergraduate interest in health sciences and therefore bring an internal pipeline into pharmacy. The problem is the accreditation agencies are putting the screws on them.

**Fifteenth pattern: The conversation about redefining the pharmacy**

**profession is happening on a global scale.** The definition of pharmacy is becoming more uniform but we [Respondent 11] must understand, especially as we get into the third world countries, the uniform definition of education--or uniform definition of a healthy diet or a day's work--is still evolving. The Internet is making so much available these days but believe it or not there are companies that distribute drug information and get paid for it. That becomes a factor in third world countries. There is much to be done in organizations like Rotary International, which do a great deal, for instance, the polio immunization effort, in that volunteers deliver services. Not always trained individuals, but the job is getting done so the legal definition of practice as is thought by so many state legislators is not as big an issue in third world countries.

***Theme: Understanding the culture of a country and how that shapes the response to a major change effort is vital to professional change.*** In the overdeveloped countries, when you get into education, the scope of practices becomes part of the debate. Respondent 4 expressed these thoughts:

That is such a tower of Babel, that is a nice biblical reference, ...that is something that is such a quagmire that I don't think it is a fruitful thing for a profession in one country to try and emulate what the professionals do in the U.S. with what the professionals might do, let's say in a far eastern country because the culture is so different and the way in which change occurs is so different. It is vital to understand the culture and the change process.

I have had enough trial and tribulation dealing with the other side of my campus here at the University, rather than trying to change the nature of the practice of pharmacy or education for that practice in let's say Bangladesh.

***Theme: On a global scale, the Pharm.D. is not equivalent around the world.***

***The ACPE has opened several international initiatives and dialogue opportunities.***

Professional roles in healthcare in other countries are much more government controlled than in this country. A lot of countries will not have a Doctor of Pharmacy degree, but

they want to redefine what pharmacists do in the new healthcare arena such as China, Korea, Libya, and Saudi Arabia. Many of the European countries are eager to move pharmacy in a different direction. Respondent 14 said, “I don’t know one country that is happy with what the pharmacists are doing. They want to emulate what we have done here.”

In Europe and Japan, pharmacists are highly respected. Just last year, Japan increased the curriculum by a year and required all of the clinical aspects in the curriculum [Respondent 14]. The British system is different than the U.S.; one example is that pharmacists have the authorization to prescribe. It is a tenth the size of the U.S., and pharmacists have done similar things in Great Britain without having a Pharm.D. degree [Respondents 9, 11, 12]. It was changed within the provision of the law. UK differs in another respect: there is only one membership organization, the Royal Pharmaceutical Society that represents pharmacy in Great Britain. That group oversees the ethical components, the licensing departments, and the division that speaks for pharmacy. Australia made great changes to the scope of practice in the 1980s and 1990s with no resentment or kickback from anybody. They did it by working with physician groups, working with patients, and working within the pharmacy community. Big changes were made in Walgreens Australia and New Zealand because they focused on changing the face of the profession and how the profession is viewed [Respondent 11]. These countries were successful in expanding pharmacy practice by staying attentive to what needs to be done to help the profession, not focusing on the initials behind a name.

These discussions occurred in Scotland, Edinburgh, and Nottingham; and it really doesn’t have anything to do with credentials or initials [Respondent 11]. It has to do with what does the practice of pharmacy need to do in order to evolve. The assumption should

be that a Ph.D. doesn't mean anything, but what matters is how a professional works collaboratively with other people [Repondents 3, 9, 11, 12]. The focus should be on how the profession needs to adapt and change.

Canada does not require a Pharm.D. but many Canadians come to the United States and earn the degree and then return to Canada to practice [Respondents 5, 14]. The conversation between the U.S. and Canada with regard to the inter-changeability of degrees is continuing. You have the accreditation group, American Council on Pharmaceutical Education now called the Accreditation Council on Pharmaceutical Education, because it is now worldwide. Academic sections and experiential sections of curriculum are being discussed; there is a flow of academics, especially in the English speaking countries, that are cross-pollinating educational issues such as research [Respondents 9, 14]. Other countries want us to accredit their programs.

We [Respondent 11] were concerned about the political implications of this situation. Federation of International Pharmacists is an organization where we [Respondents 9, 11] are working together, but much of this is related to changing the culture of the specific country and it's a time-consuming process. So what we [Respondent 11] have done so far is acted as a mentor for the rest of the world. International students in our programs return home and help their country [Respondents 3, 6, 9, 14]. One respondent explained that his university has had a program in Thailand for 20 years; faculty come to the U.S. to get both a Ph.D. and a Pharm.D. and go back in educational circles in Thailand. The conversation right now is what they need to do about expanding their political education and what kinds of degrees are important, given the culture of their country. It is the same conversation in Japan [Respondents 1, 12, 14]. A faculty member from my university is currently on a two-year assignment at the Japanese



Medical School in Tokyo.

At the WHO meeting in Washington, DC, one issue discussed was how to scale up and expand health profession education throughout the world. There are many countries where there isn't any pharmacy at all. Respondent 12 illustrated the cultural aspect:

I have been to Japan four times, have had hundreds of Japanese students and I never thought that they would change to the Pharm.D. I understand why they would not change, because their culture is different I have authored part of the Japanese textbook but 40% of the graduates will work for industry.

Respondent 14 supported cultural diversity:

I had a group in my office from Iraq that needed help designing their curriculum to a Pharm.D. curriculum. It is difficult to consult unless you know the prospective culture of the country. We are behind China and Great Britain and a number of countries in allowing pharmacists to be responsible in the delivery of healthcare and their medicines. I think they have 10 schools in Canada and look at their population. I am impressed what Canada has been able to accomplish in the change in the pharmacy profession.

Respondent 8 shared this story about Thailand:

I consulted with a school in Thailand, the question was should there be a Pharm.D. or baccalaureate degree. They finally concluded that the Pharm.D. was what they needed, they had no clinical pharmacists whatsoever, so they came over here for a while and took the knowledge back. European countries have stayed with the pharmacy school model that we had before WWII that was really a chemist in the neighborhood. These were people who knew chemistry of the drugs that were able to put together concoctions that would not blow up [and] that would help people. In Germany, they are called chemists. In France, they are still in the compounding era. They are reluctant to change, but I think that they have seen the value of the change to the Pharm.D. especially with the power of all of these new drugs and genetics. I think there is some movement in that direction and they have a huge advantage over us, their government pays for it--single payer system. If a single payer decides that is the way it is going to be, then that is it. Without it, there is constant question of who is going to pay for what and how much.

Respondent 5 shared his experience in Malaysia:

The country of Malaysia now has eight pharmacy schools. Pharmacists play a major role in hospitals, in rounds with the medical doctors to decide the choice in

drugs that are going to be used to treat the patients, and [this] has spread into the practice in communities.

### **Additional Findings**

The interview schedule included a large number of questions about various perceptions of respondents regarding the effect of the Pharm.D. degree. The author's attempt to obtain insight regarding the research questions resulted in two themes that combined into one pattern not specifically addressed in the research questions.

The ACPE started an international commission to investigate how other countries train pharmacists, actually putting together criteria on how to bring in patient care, or what that training would look like within the standards of the particular country [Respondent 3].

Canada has made the decision to go Pharm.D. by 2020. Because they will be going through some of this [change process], it is important to have dialogue and get the issues out on the table and then have people agree to a goal on where the profession should be headed and how to accomplish that through degree requirements for entry-level practitioners. Respondent 11 illustrated the global landscape:

I have been a member of the International Pharmaceutical Federation for a number of years, served on the executive committee for at least four years back in the 1990s. The role of the pharmacist in the healthcare system in the UK or in Germany, the Netherlands, France, Italy, or most European countries is something that most American pharmacists would aspire to reach that goal of responsibility and respect. There is a difference in the educational systems. The title of Doctor is one that is underappreciated by some and over appreciated by others. When you look at the Canadian system for instance, at pharmacy education, they are moving in concert with the accreditation council for pharmacy education and I think that there is an effort to harmonize the way that people use the educational experiences across the Eurozone. English speaking countries that were once under British rule (Australia, New Zealand, etc.) particularly in the Southwestern Pacific are significant players with the world health care organization (WHO) and the WHO is a little bit like the U.S. government. It is finally waking up to the role of the pharmacist or the potential role of the pharmacist. But WHO has been dominated by Swiss medical practitioners and the pharmacists in Switzerland have recently achieved recognition.

**Sixteenth pattern: The Pharm.D. must rely on the pharmacy technician in the dispensing role in order to have time for patient care.** One issue that is critical within pharmacy practice is the role of pharmacy technicians. If we [Respondents 11, 14] support the pharmacy technician to do a lot of the dispensing functions, this will allow more Pharm.D.s to conduct more clinical care.

***Theme: The role of the pharmacy technician has created huge internal conflict for many years, and this continues to this day.*** Now, we [Respondent 3] are finally allowing technicians to be involved in dispensing prescriptions, but it took from the late 1950s. There was increasing support during the 1960s, but it took until the late 1990s before this became legal because of the function of handling drugs. Pharmacists were against this trend because, although the theme was to be in the clinical role, the thought process was that if you bring in technicians who might replace me, they could put me out of work [Respondents 3, 6]. This was a primary concern to pharmacists who worked for chain drugstores. In these practice settings, the primary responsibility of the pharmacist was processing and dispensing drugs based on doctors' prescriptions.

***Theme: The profession needs to get technicians licensed, but the idea of accomplishing this in this country will require a daunting political battle.*** This is an issue of control, and currently the pharmacy technician is defined as supportive personnel [Respondents 11, 14]. For example, in Virginia the chain drugstores wanted to go to no limit regarding the technicians to pharmacist ratio (unlimited). Right now some states have a 10:1 ratio and some states have a 2:1 ratio [Respondent 13]. There has been resistance because, if a technician is the one who refills a prescription, what is the pharmacist to do? This, again, is primarily problematic to those who work in the large chains where there is essentially no role for clinical pharmaceutical practice in the

existing business model. The question becomes whether allowing the cheaper labor (technicians) to fill prescriptions frees the pharmacist and facilitates patient counseling. Or, does it become the impetus for cost saving and hiring fewer Pharm.D. pharmacists?

**Seventeenth pattern: Location, age, and patient compliance affect access to and quality of healthcare.** Although the following themes were not directly related to the research questions, they are important to understanding the holistic story of the transition to the Pharm.D. in pharmacy education.

*Theme: One of the surprises has been the rather quick movement of pharmacists out of the inner cities.* Respondent 12 stated that he has been sitting around curriculum meetings for 17 years. About five years ago, he realized that there was no civic duty. There are a growing number of drug-induced problems that have increased over the decades, especially in the under-served communities, but fewer pharmacists are assisting these neighborhoods. Respondent 12 expressed that he would like to see a tuition forgiveness program for new Pharm.D. graduates.

*Theme: One out of every five Medicare patients ends up in the hospital because they do not take their medications correctly.* Respondent 12 believed that pharmacy needs to be involved in building more clinical programs and hospitals, especially with Medicare. There are questions related to the acceptability of Pharm.D. on services and the marketplace because we [Respondent 3] still have not figured out a good way to pay pharmacists. Between the 1980s and 1990s our [Respondent 12] practice went from 63% to 80% of all patients being on some kind of fixed rate for reimbursement. Respondent 12 concluded, “there has been effective resistance to change in academia, effective business models of the corporate members of the chain drugstores, and hospitals dealing with the declining revenues because of Medicare/Medicaid contracting.”

## **Summary**

The clinical doctorate is a trend in health professions, seen as either an advanced degree available for experienced professionals or as the sole entry-level degree to practice. This trend is encircled by both support and uncertainty from the numerous stakeholders that are involved. Limited literature is available on how this development affects healthcare education, delivery of services, interdisciplinary alliances in health professions, or the public in general, who constitute the patient-base. The purpose of this study was to examine how key professional leaders and policy makers perceived the transition to the clinical doctorate in one profession, pharmacy, during the establishment and implementation phase of the Pharm.D. This retrospective study provides insight into the effects of the change on the pharmacy profession and associated stakeholders.

This qualitative case study employed semi-structured interviews to obtain an oral account of individuals who were intimately involved in the decision-making process. The unit of analysis was established by limiting the population to four critical stakeholder groups and the timeframe of 1989-2002, in order to understand a complex case that spanned over 40 years. Of the 43 individuals who constituted the population, 28 were still available (15 were deceased, ill, retired). The 14 of 28 represent 50% of those who could, and were, willing to participate.

Triangulation included the review of the curriculum vita that represented objective information and demographics of the participants and interviews. The interview schedule consisted of 27 open-ended questions that were designed, based on the research questions, to assess the subjects' perceptions of the benefits, risks, and alternatives of the Pharm.D. on healthcare education, delivery of services, interdisciplinary relationships, and the societal and economic landscape of the healthcare industry.

The procedures were consistent with a case study approach. Fourteen interviews were conducted by telephone; and, although designed to be completed in one hour, several participants were compelled to continue the conversation, an indication of their enthusiasm for the subject. The researcher attempted to maintain confidentiality, as was explained in the participation letter.

Each participant told a story and the researcher only interjected to remain within the content frame, monitor the time, or ask a specific question. The findings were organized around the themes that the researcher found (open coding) and the patterns (axial coding) that represent several themes that come together. They are presented with the patterns first, with the themes for that pattern encompassed within the broader content of each pattern.

Research Question 1a focused on the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate on health professions education. The first pattern represents the historical accounts leading up to the ACPE mandate. There was a slow, increasing understanding that the practice of pharmacy both in hospitals and in community settings should be patient-care based. Because of the uncertainty and magnitude of the changes, this process was going to require comprehensive and explicit dialogue among all stakeholders. For this transition to be uniform and organized, it had to stem from the accreditation bodies and the educational profession. Three themes constitute this pattern. First, the decision-making and implementation timeframe was a constructive process, but it was very controversial with a lot of anxiety about it. Second, many respondents believe that pharmacists are the most underappreciated health profession. Third, debate continues on whether pharmacy education should focus on patient care or the product.

The second pattern was for this transition to be uniform and organized; it had to stem from the academic accreditation bodies and the educational profession. Major curricular changes in pharmacy education were necessary for successful conversion to the doctorate level. Five themes demonstrated this pattern. First, during the transition many schools revisited their clinical curriculum in making changes, because those 7-10 years sustained a major overhaul in accreditation standards. Second, in order for the pharmacist to take on the responsibilities associated with drug management, pharmacy education would need to be revamped. Third, Concern was expressed over which degree was appropriate. Fourth, a large group of individuals, these being academics, opposed the doctorate as the entry-level degree into pharmacy. Fifth, the biggest curricular change was the addition of the one-year experiential work.

The third pattern focused on the experience of internal resistance experienced by many institutions when converting to the Doctor of Pharmacy degree program. Six themes account for this pattern. First, the state universities in many cases were much more research focused and research intensive, with NIH or FDA funding; and that is viewed positively across the country and internationally. Second, schools that established the educational model of the Pharm.D./medical school had an easier time with the transition. Third, it was a struggle to create another position called clinical faculty. Fourth, there was originally a shortage of clinical faculty in the Pharm.D. programs. Fifth, an issue that the schools faced is how to treat these new academics in terms of promoting them. Sixth, within the schools and colleges of pharmacy, the biggest opposition was the basic science faculty.

The fourth pattern focused on the external resistance experienced during the transition to the Pharm.D. Six themes support this pattern. First, there was opposition

within the profession as well. Second, many of the people who held a Bachelor of Science degree (B.S.) in pharmacy as the main credential for a lifelong practice as a registered pharmacist were facing a choice, deciding on whether they wanted to put the energy (i.e, time, money, mental) into completing the add-on Pharm.D. or retire from private practice. Third, the B.S. pharmacists said “wait a minute,” concerned that they would lose potential employment to the Pharm.D. Fourth, the ability for pharmacy practice to evolve is dependent on the opportunities that exist in community and hospital settings. Fifth, the educational outcomes of the pharmacy curriculum limit the roles and responsibilities of pharmacists in practice. Sixth, respondents unanimously agreed that the primary external opposition was from the chain drugstores and owners of regional chains.

The fifth pattern is recognition that the impact on students and the entire educational experience was an important factor in both the decision and implementation of the professional doctorate in pharmacy. Three themes are associated with this pattern. First, a student can’t go through this program without going full time and having a structured curriculum. Second, there is a sense that, to differentiate themselves now, new graduates have to get residencies or certifications. Third, the type of student attracted to pharmacy is part of the problem.

The sixth pattern identified is that the changes in pharmacy education curriculum as related to academia have been an evolution, not a revolution. Seven themes constitute this pattern. First, the ACPE developed the add-on Pharm.D. to allow B.S. pharmacists to upgrade their credentials. Second, the complexity of drug interactions is rising, and it is necessary to educate pharmacists to reflect this in patient counseling. Third, the changes wrought by the new Pharm.D. required extensive debate about and changes in pharmacy



curriculum and instruction. Fourth, the Commission to Implement Change did not approach this conversation from the standpoint of whose or which instructional content was going to be deleted. It was far more concerned with how the program could get what was needed, i.e., a curriculum to reflect the nature of the practice of the profession and to do this in a reasonable period of time. Fifth, the combination of new accreditation requirements and the necessity of background knowledge has led some schools to establish a pre-pharmacy program. Sixth, one result of institutions being required to bring in additional qualified people to implement the revised programs has been a rise in tuition. Seventh, there was not one grand scheme, template, or module to follow.

Research Question 1b focused on the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on the delivery of service. The seventh pattern identified the success of the transition from product-based to patient-based pharmaceutical care as inconsistent throughout the U.S. healthcare system. There are five associated themes. First, with the introduction of the Pharm.D., the role for the new clinically-trained pharmacist expanded rapidly in hospital settings. Second, the advancements in the delivery of services and the scope of practice are dependent on geographic location. Third, state regulations regarding the scope of practice of pharmacy are widely varied throughout the country and have a direct impact on the delivery of services. Fourth, there appears to be a relationship between licensure, state governments, and the protection of salaries. Fifth, one issue that makes pharmacy unique is that it is the only profession, where there are two operant licenses: the practitioner (pharmacist) and then the facility (the pharmacy).

The eighth pattern is that finances play a major role in changing pharmaceutical practice. Five themes constitute this pattern. First, a primary player is the pharmaceutical

industry. Second, the business model of the chain drugstores limits the roles and responsibilities of pharmacists in practice. Third, in the attempt to modernize the pharmacy practice from a product-oriented to a patient-oriented profession, one concern was how pharmacists were going to get paid for the advanced services. Fourth, a limiting factor is that an organized system for compensation for services has not been established. Fifth, the current third-party reimbursement model does not provide incentives for pharmaceutical care.

Research Question 1c focuses on the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on the interdisciplinary relationship of other professionals. Pattern nine is concerned with how other fields in the healthcare system responded to the changes happening in pharmacy; i.e., professionals in the U.S. healthcare system are strongly resistant to change and seek evidence-based research that a change is necessary. There are four associated themes. First, the pharmacy profession had no strategic plan to inform the other stakeholders, but there is a constant, slow acceptance of the abilities of the pharmacist. Second, there is a trend in the healthcare delivery system toward a collaborative care model. Third, many respondents have confidence that physicians will rely more and more on the information from the pharmacist. Fourth, the changing landscape in health care requires a team-based approach, and the pharmacist is the best professional to manage the drug therapy.

The tenth pattern is that most patients need drug therapy; and many physicians, nurses, and other health professionals are recognizing that someone on the team has expertise about medication therapy, apart from insights about diagnosis. Understanding the competencies and skill sets of other disciplines needs to occur at the educational level. There are three themes. First, pharmacists lack the skills in physical assessment that

are necessary for patient diagnosis, and there is still debate whether pharmacy education should focus on patient care or the product. Second, one route to change the face of a profession is to educate health professionals together in a collaborative environment. Third, there are more opportunities for the disciplines to be educated together.

Research Question 1d relates to the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on the societal and economic landscape of the healthcare industry (cost-benefit)? The eleventh pattern focused on the gradual change in the practice and professionalization of pharmacy and the concomitant views of society. Five themes add up to this pattern. First, one of the underlying reasons for the transition to the Pharm.D. was that pharmacists wanted more responsibility, but there is a difference between increased responsibility and autonomy. Second, pharmaceutical care services cannot be forced upon the public; rather, changes in perceptions and expectations of individual patients represent a slow, steady process. Third, when opportunities are present for pharmacists to practice to their fullest potential, society will benefit as a whole. Fourth, opportunities to practice pharmaceutical care are still in their infancy. Fifth, the pharmacy profession, as a whole, had not been proactive in public relations. The health literacy of an individual seems to be directly related to personal interaction with a pharmacist.

Research Question 2 focuses on the transferability of an entry-level clinical doctorate related to professional opportunities. The twelfth pattern identified the Doctor of Pharmacy as well prepared for related careers that do not require private professional practice, such as the pharmaceutical industry and prescription development. Two themes correspond to this pattern. First, opportunities are expanding in hospital and community settings. Second, pharmacy is a huge industry, and Pharm.D.s are highly sought today

throughout the field.

The thirteenth pattern is that there were external forces behind the progression of the clinical doctorate in pharmacy, and other professions that are contemplating the transition may want to address these factors. There are five related themes. First, the respondents perceive this transition to be successful in pharmacy because all stakeholders were involved. Second, the respondents agreed that other professions might want to take time to learn this historical progression because this process has worked well for pharmacy. Third, if the various stakeholders in the educational institutions successfully implement change in the education requirements, the graduates of the Pharm.D. programs will have a ripple effect through the rest of society due to their upgraded capabilities and professional practice. Fourth, it is important for a profession to articulate clearly what the difference will be when the professional doctorate program is implemented and how that will translate to better outcomes for patients. Fifth, the intention of the profession to transition to the practicing doctorate should be to establish a role in a collaborative team with other healthcare professionals, not increase the professional autonomy.

The fourteenth pattern identified the biggest surprise from the establishment of the Pharm.D. as the sole entry-level degree: the unexpected rise in pharmacy schools. Four themes correlate to this pattern. First, during the transition period, leaders thought that this educational change would decrease the number of applicants. This turned out to not be true. Second, in addition to the increased number of schools, the class size has grown as well. Third, the perception of uncertainty prevailed regarding the quality of some of the new schools and new programs within existing schools that have been started in the past 20 years. Fourth, the largest increase of new programs has been in private schools, many without the established culture of doctoral or health professions education.

The fifteenth pattern regarding the conversation about redefining the pharmacy profession is happening on a global scale. Two themes justify this pattern. First, understanding the culture of a country and how that shapes the response to a major change effort are vital to professional change. Second, on a global scale the Pharm.D. is not equivalent around the world. ACPE had done several international initiatives and created dialogue opportunities.

There were additional findings that were not specifically addressed in the research questions. Pattern sixteen is that the Pharm.D. must rely on the pharmacy technician in the dispensing role in order to have time for patient care. This pattern is supported by two themes. First, the role of the pharmacy technician has created huge internal conflict for many years and continues today. Second, although technicians need to become licensed, accomplishing this in every state in this country will precipitate a daunting political battle.

The seventeenth pattern is that location, age, and patient compliance affect access to and quality of healthcare. Two themes constitute this pattern. One theme is that respondents were surprised at the rather quick movement of pharmacists out of the inner cities. The second is that one out of every five Medicare patients ends up in the hospital as a result of inappropriate drug management.

## CHAPTER V

### DISCUSSION AND CONCLUSIONS

#### **The Study in Brief**

Freburger et al. (2008) indicated that there has been minimal research on how the trend of doctoral education in health professions will affect health professions education, delivery of services, and the interdisciplinary relationship of health care providers. This study, a qualitative post hoc assessment on the transition to the clinical doctorate in one profession, pharmacy, was perceived by professional leaders and policy makers during the inception and enactment phase of the Doctor of Pharmacy will address this gap. The mandate of the Pharm.D. as the entry-level degree was established in 1992, so the effects of the change were explored retrospectively. Leaders in other health professions who are contemplating the clinical doctorate can examine these results for commonalities as they transition to the entry-level degree into practice.

Over the last 20 years pharmacy has adopted the professional philosophy of patient-centered practice known as *pharmaceutical care*. This is accompanied by the 1992 ACPE mandate that the Doctor of Pharmacy will be the sole entry-level degree into practice. The implementation of these two monumental decisions required pharmacy education to be restructured, moving away from a product-based focus to patient-based education. Curricular changes, guided by the ACPE accreditation standards, were paramount in the transition to the Pharm.D. degree. The Pew Health Professions

Commission Report (1995) supported pharmacy in the redirection of its education away from dispensing medication to a more clinical role. Cartwright and Reed (2005) suggested that academic programs cannot be mandated into greatness and there must exist a commitment to the goals and vision of the Pharm.D. for success. The movement toward higher degrees in health professions, either for entry into practice or for advanced practice, will continue to gain momentum (Collier, 2008).

This continuing trend sets the central research question for this study, “What are the current perceptions (benefits, risks, and alternatives) of key policy makers in the pharmacy profession who participated in the decision to require (by January 1, 2003) the clinical doctorate (Pharm.D.) as the entry-level degree for practitioners?” Consistent with this question, the purpose of this study is to provide insight into the perceptions of the leaders and policy makers involved in the changes that led to the practicing doctorate as the entry-level degree for pharmacy.

The methodology for this study was grounded in literature pertaining to research and policy related to clinical doctorates in the health professions, the structure and dynamics of professional agencies and educational institutions, aspects of degree classifications, and theories and studies of the clinical doctorate as an entry-level degree. The literature was drawn from the physical therapy, occupational therapy, nurse practitioner, and pharmacy disciplines that address issues and concerns that have risen in the transition to the clinical doctorate. The empirical research questions were designed to investigate the overall central research question as noted above. Specific instruments, consistent with the research questions, included an Interview Schedule for the subjects and a Document Analysis Protocol for the obtained curriculum vitas.

For the analysis of this study, the researcher relied on both emic qualitative

methods and etic-based analytical techniques to uncover the complexities of this case. Qualitative methods of data collection and analysis, rooted in grounded theory, provided the researcher an opportunity for in-depth understanding of intricate factors that were common among the responses.

The development of the interview schedule was based on questions written by the researcher and those borrowed from similar instruments in previous studies. Of the 43 members of the four stakeholder groups, 14 participated. Only 28 of the 43 members were available due to death, illness, retirement, etc. of the remaining 15; 14 out of 28 resulted in 50% participation among those still available. Interviews were conducted with the 14 participants who represented members of the Commission to Implement Change in Pharmacy Education, The Janus Commission, the AACP Board of Directors, and the ACPE Board of Directors. The Document Analysis Protocol was developed specifically for this study. The combination of these instruments constituted the data representing the perceptions of the key leaders and policy makers.

The tools (Interview Schedule and Document Analysis Protocol) were used according to the descriptions found in Chapter III. This qualitative case study unfolded with a contact letter being emailed to the key individuals, followed by a consent form and request for the curriculum vitae. The interviews were arranged with those key individuals who chose to participate. In several instances, the subject was so enthusiastic about the opportunity to address these issues retroactively that more than a few interviews went considerably beyond the planned time allotment, up to two hours. Each interview session lasted approximately one hour, with follow up occurring when needed. Each session was recorded by the researcher and transcribed. The tools used for data collection were designed to retrieve pertinent information that could assist the researcher in critically



analyzing and reporting the meaning of the complex factors that revealed what was distinctive about the effects of the transition to the clinical doctorate in one profession, pharmacy.

In this case study, data analysis techniques to search for commonalities and patterns utilized were rooted in ground theory. First, the author conducted a general holistic reading of the transcripts. The interview transcripts were then sorted into themes (open codes) that demonstrated trends. These open codes were categorized into patterns (axial codes) that were identified from the data.

In Chapter IV, the data were organized with each separate Research Question (RQ) being listed, followed by the specific Interview Schedule queries for that RQ or sub-RQ. Then, the author examined all of the themes from the open coding, arranging them into patterns (axial coding) as they fit together.

For each RQ the results were then organized by the patterns that were identified by the researcher. Under each pattern, the relevant themes were listed and described, with prototypical quotes from the interviews to illustrate the themes and patterns. In this manner, the author synthesized the data from the interview transcriptions into a story, the researcher's interpretation of the overall set of interviews that represented the subjects' retroactive perceptions of the mandate to develop and implement the Pharm.D. as the entry-level professional degree to pharmacy. Finally, relating the "story" sometimes necessitated background information from Chapters I and II. Any such text was included in square brackets to alert the reader that this information did not come directly from the respondents.

The heart of this chapter is the Discussion, where the results from Chapter IV are reported (patterns and themes) and then synthesized. Those findings are then analyzed in

terms of their impact on the literature and issues in the field. Because there are many health professions moving toward the clinical doctorate and the literature is fluid, the author is aware that pertinent research may be published that was not available at the time of review of the literature.

The remainder of this chapter includes sections on Discussion, Recommendations, and Conclusions. The discussion section is organized by the two research questions and sub-questions. Each specific sub research question or research question is noted in bold. For each research question, the findings from the interviews of the four stakeholder groups and document analyses are organized by the larger patterns and the specific themes that comprise each pattern. These summary findings--patterns in bold and themes in bold italics--are then discussed in terms of relevant literature and leadership issues.

### **Discussion**

The literature review for this study reveals that most researchers try to justify the necessity of the clinical doctorate in individual disciplines within the health professions. Many health professions are in some phase of transitioning to the clinical doctorate as the entry-level degree, but there is limited theoretical or empirical information available on the effects of this developing situation. Empirical research in pharmacy has typically focused on historical accounts that proceeded and were significant to the mandate of the Pharm.D. (cf. Elenbaas & Worthen, 2009; Kendig, 1948; Miller, 1989; Worthen, 2006). Others have studied the issue from the perspective of understanding the motivations behind the mandate (Boydeen, 2006; Brazeau et al., 2009b; Cooksey et al., 2002). The works collected by Kreling et al. (2010) addressed current trends in the U.S. society, such as the increasing age of the population and increasing prescription drug use, which

indicate a need for more pharmacist interaction in patient care.

One limitation in this body of knowledge is empirical research that explains how a major change effort--changing the educational requirements for a healthcare discipline--affects the health professions education, delivery of services, interdisciplinary relationship with other healthcare providers, or society as a whole. A number of scholars have suggested that leaders in health profession disciplines who are contemplating the clinical doctorate as the entry-level degree into practice should examine the potential benefits, risks associated with the transition, and alternatives associated with changing educational requirements necessary to enter a profession (cf. Freburger et al., 2008; Greenwood & Hinings, 2002; Siler & Smith Randolph, 2006; Williams-Piehota et al., 2011). These gaps in the literature clearly imply the need for more research on the trend of the clinical doctorate in the health professions.

A number of other questions can be raised about how changing the educational requirements of a profession influence the philosophy and practice of the profession. (cf. Head, 2004; LaBelle, 2004; Phelps & Gerbasi, 2009) Specifically, does changing the professional philosophy guarantee that all stakeholders, such as the healthcare system, third party payers, and the patient base, will embrace the necessary changes to transform the practice to match the philosophy? In an environment of rising health care cost and a chronic shortage of qualified health profession educators, how does changing the educational requirements impact educational institutions and program administrators? For successful transformation of a professional practice, all stakeholders need assurance that the clinical doctorate degree provides graduates who are prepared for educational and professional roles that are required. This retrospective study focuses on these questions by exploring the change of educational requirements in one profession, pharmacy,

through perceptions of key decision makers and policy makers.

### **Research Question 1a**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate on:**

**a. health professions education?**

The discussion to follow includes a brief summary of each entire pattern as laid out in Chapter IV. The related literature that correlates to each theme associated with the pattern is highlighted. This study differs dramatically from much of the literature because it includes empirical results (interviews) in contrast to the types of sources that predominated the wider literature. Most of that information represents policy-focused position papers or opinions. The analysis that follows emphasizes how this work is different, new, controversial, confirming, etc., as compared to the extant resources.

Appendix G contains the outline of all patterns and their respective themes, listed without text--to give a sense of how they relate to one another. This essentially highlights the big picture versus the details of each theme or pattern that are provided in the respective textual descriptions/interpretations.

Several respondents explained that the Commission to Implement Change, established in 1989, set the design and guided the profession in the transition to the Pharm.D. Discussions regarding potential educational requirements and a practice model were happening for many years prior to the mandate. Buerki (1999) noted that the first discussions about establishing a uniform structure of pharmacy education occurred in the late 1880s. Cohen (2008) explained the progression of the pharmacy education, starting as the apprentice model and moving to the four-year bachelor's degree by an accreditation mandate in 1932. After WWII, there was increased momentum to improve

the rigor of pharmacy, but it wasn't until the 1990s that there was consensus that the professional practice model should be "pharmaceutical care," and the Pharm.D. was established as the sole entry-level degree into pharmacy practice (Buerki, 1999; Cohen, 2008).

The Commission to Implement Change published a series of reports that guided faculty and administrators at pharmacy institutions in debates over the wisdom, or lack of, in accepting these changes. Finally, in 1992, the AACP Board of Directors voted to accept the Commission's position papers as a process to implement the change.

***Theme: The decision-making and implementation timeframe was a constructive process, but it was very controversial with a lot of anxiety about it.*** The respondents recounted that, when the ACPE made the pronouncement that all schools would need to transition to the Pharm.D. and change the curriculum, people thought it would be a smooth transition. But the reality was the conversation required adjustments at numerous levels, and not everyone was on board.

One respondent referred to the timeframe as "messy." Another respondent recalled it as a very contentious process. There was uncertainty and trepidation by schools to determine how to manage the process and find the necessary resources to fund it. Position papers and reports provide outcomes (cf. ACPE, 1993; American College of Clinical Pharmacy, 2000; Commission to Implement Change, 1997 a, 1997b, 1997c, 1997d, 1997e), but the author is unaware of any published literature or documents that express the intensity of the debates. Thus, the details provided in Chapter IV as derived from these interviews constitute new information and insights to understanding the transition to an entry-level clinical doctorate in the healthcare professions.

***Theme: Many respondents believe that pharmacists are the most***

*underappreciated health profession. The pharmacist's contribution to healthcare is undervalued because they are invisible to the public.* Many respondents believed that this philosophy is deep-rooted and multi-faceted. A respondent noted that pharmacists have been underappreciated for a long time, illustrated by his experience in the U.S. military when pharmacists were not commissioned officers. Enlisted soldiers were sent to a six-week training and were referred to pharmacists.

The American Medical Association (AMA, 2012) reported there are over 80 careers in health professions, in which trained practitioners have influence on the prevention or improvement of the health of an individual. Head (2004) noted that each profession has identified competencies for an educational credential and trains individuals to perform specific job responsibilities within the occupation. But there is no consistency within health professions regarding the required academic degree that ensures these competencies are met prior to entering practice. One respondent recalled that pharmacy first started adding hours to the curriculum but did not change the level of degree, which complicated the situation.

This debate of pharmacists being commissioned in the military surfaced in Congress. Concurrently, there was confusion in pharmacy education because California, and a few other colleges across the country, were operating with the Pharm.D.; but there continued to be pharmacists practicing with a B.S. degree. The ACPE tried to move to a uniform degree at that time, but not all schools were in favor of it.

Cohen (2008) stated that there is confusion on the part of the public and other healthcare providers regarding the required standards across pharmacy education and practice. Many health professionals are accepting the value that pharmacists add in patient care but some individuals in almost all fields continue to view pharmacists as

merchants and not as a true health care professional. Boyden (2006) concluded that pharmacists who engage in clinical and therapeutic settings have demonstrated the advanced knowledge and skill set associated with the Pharm.D. degree, but those who practice in a community practice setting have not had the opportunity to utilize the acquired abilities to the maximum potential. The details provided in Chapter IV confirm that there was controversy, confusion, and debate surrounding the necessary educational requirements for a practicing pharmacist that needed to be addressed before the transition to a single entry-level degree into pharmacy practice could be successful. New information and insight were derived from these interviews related to the specific issues that surfaced during the transition to the Pharm.D., reflection on how these issues were addressed, and the concerns that are still not resolved.

Many respondents deem the community pharmacy business model at the root of the slow growth of patient-oriented care. The fact that the majority of community pharmacists are still inaccessible to the public, filling prescriptions from behind the counter, is not helping patients understand their capabilities or value. Pharmacists struggle with having to excel at dual identities. The healthcare professions necessitate the practitioner to be proficient in the science and technology of the profession but also must be talented in business and marketing to have a successful patient-oriented practice. The current business model in pharmacy, particularly for those employed in the large chains, does little to promote the vision and practice of patient pharmaceutical care. This comprehensive narrative is new information in the field, as the author found no previous studies that addressed this state of affairs.

***Theme: There is still debate whether pharmacy education should focus on patient care or the product.*** The accepted wisdom to this theme is reflected in the

following summary. During the depression era, pharmacists were perceived as *retailers* and in oversupply. Cohen (2008) explained that this prompted academics to call for increased science and rigor in pharmacy education, replacing training in retail and management. Concerns about the curriculum, the state of the profession, and public and government perceptions of pharmacists were evaluated for the next 30 years. In the early 1990s the consensus of *pharmaceutical care* as the professional mission and the elevation of the entry-level degree to the Pharm.D. were guides to transform pharmacy education away from product-oriented to patient-oriented (cf. Buerki, 1999; Cohen, 2008).

Providing more detail on this issue, the respondents concluded that this change has not been universal across pharmacy schools. Respondents expressed that programs that are closely related to medical campuses, which received exposure to greater opportunities of collaborative care, have been more successful in transitioning to patient-based learning than others. One respondent suggested that a primary factor in the debate is the structure of the schools, observing that most state universities with medical campuses are affiliated with a pharmacy school, while many private or proprietary pharmacy schools do not follow this model. That respondent continued, noting that many of the top ranked medical schools in the U.S. do not have a pharmacy school associated with them. At a professional association conference, this respondent specifically asked Dr. Layla Esposito, program officer with the Health and Human Services, about this issue. She responded that it was too expensive to develop the collaborative health education model, if you do it right. This explicit information provides new insight into the complexities of discussions on changing the focus of pharmacy education. While it has been established that the professional mission of pharmacy has evolved to patient-based practice, these respondents addressed the importance of interdisciplinary education



to concentrate successfully on patient-oriented learning. Therefore, to accomplish the transition to patient-based pharmacy practice, cooperation is required from many stakeholders to develop learning models that can provide the necessary resources and experiences. The details of the interviews in this study suggest a key limitation to that actuality, i.e., many stakeholders believe that a truly interdisciplinary learning model is cost prohibitive.

**Second pattern: For this transition to be uniform and organized, it had to stem from the accreditation bodies and the educational profession. Curricular changes in pharmacy education were necessary for successful conversion to the doctorate level.** Trends were occurring in the healthcare industry, specifically pharmaceutical care, that indicated a broader knowledge related to the management of drug therapy was necessary. In order for pharmacists to be the professional who has the knowledge, skills, and ability to be the expert in drug management, pharmacy education and pharmacy practice would both need to be restructured to meet the demands. There is very little literature that addresses this complex situation.

These findings represent work new to the field. The author was unable to find any other empirical retrospectives on how these curricular processes played out under the original mandate to change to the Pharm.D. and the concomitant responses of accrediting agencies and pharmacy schools.

***Theme: During the transition, many schools revisited their clinical curriculum in making changes because those 7-10 years sustained a major overall in accreditation standards.*** The respondents were in agreement that the ACPE needed to set high curriculum standards for the Pharm.D. The timeframe when the B.S. program was phasing out and the Pharm.D. was being added was a stressful time for educational

institutions. The subjects emphasized that this was primarily stressful on faculty and administrators who were pondering curriculum revisions, content changes, or cutting hours and courses, hence, faculty. These results are partially in agreement with Davis and Burnard (1992), who found that, as health professions restructure the requirements for entry into practice and the scope of practice, educational institutions will be responsible for distinguishing between the different levels of education and their relationship to levels of professional practice.

Respondents explained that some pharmacy schools eagerly revamped their clinical curriculum in response to the ACPE mandate, while others waited until they were forced to comply with the new accreditation standards. Some schools took the bottom-up approach; some schools used a top-down approach. The interviews revealed that the intention and eagerness with which a school approached implementing the program was reflected in the success of the transition.

The transition at the institutional level was slow at first. Pharm.D. cohorts consisted of 10-12 students at a time. Program leaders built stronger relationships with medical schools and practicing physicians, expanding the practice of patient care and establishing a place for the pharmacist on the patient care team. Respondents acknowledged two events that propelled this movement. First, Manasse (1989) published a paper that described how patients with chronic diseases in community pharmacies could, and should, get patient care; and the pharmacist will make sure they receive optimal benefits from their medication. Second, the Pew Commission (IOC, 1999) reported on how excessive drugs were being used and the medical errors surrounding drug therapies.

Related to these findings, Siler and Randolph (2006) noted that most health

professions try to ensure the quality of the new professional by requiring graduates of accredited programs to pass a licensing exam. Educational credentials and degree requirements for entry into a health profession are guided by the accreditation governing bodies. The accreditation agencies report to the U.S. Department of Education and are accountable for the standards of the programs in which they grant accreditation.

In the U.S., colleges of pharmacy are autonomous. If each college had the freedom to create its own curriculum, without regulations to follow, it would further complicate pharmacy education and enhance the lack of uniformity in the licensing process.

Tennant (2004) suggested that universities are charged with constructing the transformation necessary to meet the needs of career professionals, not distinguishing between the Ph.D. and the professional doctorate. In a discussion paper, Liao et al. (2007) concluded that it is the responsibility of the institutions to develop academic programs that comply with the requirements and guidelines set forth by the accreditation agencies, as well as develop curricula that fulfill the objectives of clinical practice.

O'Sullivan and colleagues were (2005) of the opinion that the nature of clinical education requires continual curriculum revision and expansion of core content to remain current in regard to best practices within the health professions. Producing entry-level practitioners academically prepared and technically trained to enter a profession is complicated and complex and requires strategic planning and educational reform.

The results of this study demonstrate empirically that pharmacy took strategic steps to expand and broaden the educational process for pharmacists. The details from the interviews reveal that the majority of institutions were proactive in making the changes necessary to the curriculum and were supported by the accreditation bodies and

professional associations. In 1989 the president of the American Association of Colleges of Pharmacy (AACP) formed the Commission to Implement Change in Pharmaceutical Education and charged the commission with developing a strategic plan to establish standards for pharmacy education in the 21st century. This was soon followed by the American Council of Pharmaceutical Education (ACPE) mandate that established the Pharm.D. as the sole entry-level degree into pharmaceutical practice (AACP, 1997). Pharmacy had adopted the professional mission of *pharmaceutical care*, so the focus was on the transition from educating pharmacists with a product focus to educating pharmacists to provide patient-centered care (Brazeau et al., 2009b). The ACPE has issued several revised accreditation standards and guidelines in 1992, 1998, 2002, and 2007 for the Pharm.D. degree programs. The 2007 ACPE Standards defined the expansion and expected professional competencies. This study is distinctive because the author provides a retrospective view on the importance of the educational curriculum and the translation to clinical practice.

***Theme: In order for the pharmacist to take on the responsibilities associated with drug management, the pharmacy education would need to be revamped.*** Several respondents noted that pharmacokinetics had gained an important role in pharmacy practice, and it was time to establish the pharmacy profession as a decision maker in drug therapy and patient management. This supports Kirch's (2011) suggestion that, as the U.S. experiences a greater demand for healthcare services, colleges and universities must produce the quantity and quality of workforce prepared to meet the demands of the health care system. Respondent 3 credited the pharmacy school at UCSF for being in the forefront, proclaiming that the pharmacist as a clinician had merit. This new information confirms that establishing the first Pharm.D. program at UCSF made a difference and

could be applied to the whole profession. This provided the confidence that moving to the Pharm.D. as the sole entry into practice was the right decision for the profession.

The current study found that the educational sector is responsible for staying abreast of the process of remodeling roles and responsibilities of health professionals and the concomitant revisions in the entry-level requirements and the scope of practice. This is consistent with Clark (1999), that educators must anticipate current and emerging trends occurring in health professions, and that they have the responsibility to establish educational programs that prepare students for practice.

The decision was supported in the Institute of Medicine (IOM) (2000) statement that the new patient-based practice model for pharmacy would require the educational system to be remodeled for the advanced knowledge, skills, and abilities necessary to fulfill the roles and responsibilities of pharmaceutical care. Engel (2000) posited that the magnitude of anticipated changes that are ahead challenge institutions to prepare students to become adaptable and develop skills necessary to manage the changes in the healthcare industry and in society at large. Educational institutions are charged with providing quality professionals that will meet the healthcare needs of U.S. society, but the economic situation of institutions must be balanced with the cost incurred to educate the professional and the existing career prospects.

The details of these interviews show that the pharmacy profession understood that, in order to change the face of professional practice, revisions in the educational curriculum constituted the first step. Because U.S. educational institutions have the autonomy to establish their own curriculum, the boundaries and guidelines for the advanced knowledge, skills, and abilities needed to be established by the accreditation governing body and supported by the professional associations. This information differs

from other work in the field because it is based on empirical data as opposed to position papers, literature reviews, opinions, or commentaries.

***Theme: Concern was expressed over which degree was appropriate.*** A

consensus was found among respondents that there was minimal discussion regarding the degree necessary for entry into pharmacy practice. The leaders felt that the degree was intended to be used by practitioners, working in the healthcare delivery system; therefore, a professional degree in line with the M.D., D.D.S., etc., made sense. This confirms Fenge (2009), who argued that the professional doctorate emphasizes the importance of research that is work-based focused and will develop *tradable knowledge* that is a complement to theoretically focused research associated with the Ph.D.

The data are consistent with findings of the Higher Learning Commission (2006) that there was a substantial need for the professional doctorate as a level in the hierarchy of U.S. degrees to create capacity to educate practitioners, especially in the health fields. This parallels Fenge (2009) who posited that more practitioners need to engage in professional doctoral programs to improve the research capacity of practitioners. The outcomes of this study concur with Engle (2000) that most health professionals are educated at the university level, and many are moving to graduate and doctoral level for entry-level degrees. However, none of the three sources was based on empirical investigations, a statement that exemplifies the entire field.

Respondents were mindful of concerns with the boundaries of the professional doctorate degree. This concurs with Nair and Webster (2006) that this type of change is often difficult in conservative professions such as health care and education. Letters that represent a credential, i.e., Ph.D. or Pharm.D., are symbolic and maintain a status in certain circles, primarily in academics. Huisman and Naidoo (2006) explained that the

resistance to change regarding the professional doctorate is because the traditional Ph.D. represents the “classical university”; and proposing alternative doctorates, such as the clinical doctorate, is too radical.

Clement (2005) acknowledged that some professions, such as medicine and chiropractic, have demanded a clinical doctorate since their inception. Some, such as pharmacy, have elevated the entry-level requirements over time, most currently the clinical doctorate. Other professions require a lesser degree to enter practice but offer advanced educational opportunities for an advanced degree. Phelps and Gerbasi (2009) found considerable differences in the accreditation standards of healthcare professions that require the practice doctorate as the entry-level degree. LaBelle (2004) suggested that credential inflation is a factor in the increase in professional doctorate programs, resulting in master’s degree requirements for professional practice being replaced by the doctorate degree. The details provided by the respondents confirm Clement’s suggestion that changing from a graduate to a professional degree will require a strong rationale to neutralize opposition against degree creep and obtain approval for the programmatic and curricular changes. Clement argued that a strong rationale is needed when raising the level of entry for practice from a master’s to a doctorate because of the impact on students, faculty, clinical affiliations, other health care programs, and institutional policy and resources. In addition, Loochtan (2001) noted that, without justification, the potential for degree creep is present. Contreras (2004) concluded that there are numerous degrees that have been devalued and also degree programs that continue to get longer while not producing graduates with greater skill sets or knowledge. The information provided in this empirical investigation confirms that pharmacy was experiencing longer degree programs, but the transition to the sole Pharm.D. degree put an end to much of the

confusion and provided guidelines for curricular change to ensure graduates obtained greater skill sets and knowledge.

Throughout the 1980s and 1990s, many Pharm. D. graduates had spent 9-10 years in college getting this credential. Some went into industry, but a number ended up on college faculties. Many respondents concluded that, wherever they were employed, many felt they were still underappreciated except at big [research] institutions. Thus, after the rigors of their education, there was a sense of dissatisfaction that many pharmacists felt after they became pharmacists, a sense of underemployment.

Ruud et al. (2010) believed that, in response to the changing economy, there is increasing demand for formal education and a degree for jobs that never before required those credentials. The requirement for academic institutions to respond to workplace demands has resulted in a position of workforce development. Brown et al. (2003) suggested that this knowledge-driven economy is a powerful influence in the rise of mass higher education, especially for the terminal doctorate. In addition, Thelin (2004) noted that the rapid expansion of professional fields and proliferation of programs in professional and academic fields has led to a chaotic situation.

The empirical results of this study indicate that the decision to require a clinical doctorate in pharmacy was filling a need that was identified in the healthcare industry. This differs methodologically from other studies that were based on position papers, literature reviews, and opinions; but it is consistent with those conclusions.

***Theme: A large group of individuals, these being academics, opposed the doctorate as the entry-level degree into pharmace.*** One respondent explained that a large group of individuals, primarily academics, many of who were educated at the Ph.D. level, were resistance to the degree change. These results were consistent with Worthen (2006),



who indicated that the introduction to *clinical pharmacy* was met with mixed responses from educators and professional leaders. Further, Elenbaas and Worthen (2006) noted that the clinical pharmacy concept was becoming rooted in the practice model during the 1970s and 1980s, and simultaneously the movement toward the Pharm. D. as the entry-level degree was gaining steam. According to one respondent, there was a conscious effort to avoid conflict with the academic community. Leaders promoted this doctorate as relating to the clinical setting, differentiating it from a Ph.D. that is rooted in original research intended to advance the knowledge of humankind. Once again the findings for this study, while consistent regarding content, are distinct from the existing literature, primarily because of the methods by which data/conclusions were obtained and analyzed.

***Theme: The biggest curricular change was the addition of the one year of experiential work.*** Many respondents believed it is vital for students to rehearse the duties and responsibilities associated with pharmaceutical care such as talking and listening to people, problem solving, and critical thinking. However, one respondent deemed this clinical education a waste of time, stating that the locations and environments of these on-site practice experiences are not fulfilling the learning objectives.

Luke et al. (2009) stated that experiential learning is designed to introduce the student to clinical cases that promote active learning, critical thinking, and *in situ* problem solving. The experiential component of the pharmacy education is an entire year where students are exposed to practitioners and various practice environments, improving the professionalization of the students and their clinical skills.

The author did not discover any empirical studies related to the effectiveness of the experiential component of pharmacy education with respect to student learning

outcomes or program learning objectives. As is the case throughout this literature, most of these studies are non-empirical, making the current study's carefully crafted qualitative analysis stand out as the exception.

**Third pattern: When converting to the Doctor of Pharmacy degree program, many institutions experienced internal resistance related to universities and their educational programs.** There are numerous stakeholders involved in the transition to the clinical doctorate: professional organizations, employers, educational leaders at various levels, and regional accreditation agencies. Boydeen (2006) noted that, at the core of the change in the pharmacy degree are leaders who debated, advocated, publicized, and voted for or against the decision to transform the requirements for the ENTRY-LEVEL degree into pharmacy practice. Some schools had more difficulty with the transition. Beyond that, one respondent believed that the culture of these schools drives the thought process and response to change. Some academic leaders, for example, had created a culture that implied that pharmacy had been doing fine, thus questioning the reason for transitioning to professional practice and resisting the process.

Changing the professional doctorate to *pharmaceutical care* does not guarantee that all stakeholders, such as the healthcare delivery system, governing bodies, or the public, will embrace and transform the practice of pharmacy to match the philosophy. Collier (2008) concluded that those who support the transition to the clinical doctorate focus on the expansion of knowledge base, technological advances, and expanded clinical experiences. Those who opposed the move to the clinical doctorate were concerned about the creation of greater workforce shortages, increased educational costs, and public confusion with the number of new kinds of *doctors*. In addition to confirming the work of Collier, the current study goes beyond that, with new information on the culture of the

academic institutions, U.S. healthcare system, and how the public was influenced by the progression of these advances in the field of pharmacy.

***Theme: The state universities, in many cases, were much more research focused and research intensive, with NIH or FDA funding, and that is viewed positively across the country and internationally.*** Although a few respondents acknowledged a difference in the transition to the Pharm.D., depending on the structure of the school (public or private, research or not), there was not consensus on who had the easier time with the transition. A respondent expressed his experience to be that the public research focused institutions had a more difficult time than private institutions because of how those universities are structured. The respondents did not, however, expand on the complexities and importance of the accreditation process on the success of the Pharm.D. transition.

Conversation continues about the complexity of a new degree approval in the literature, but not specific to pharmacy and the Pharm.D. Much of this relates to the accreditation process. Institutions that have offered a master's degree program but do not have doctoral-granting authority have run into greater complications. This requires approval from the regional accreditation agency to extend the institution's accreditation to include the new professional doctorate. The educational trend toward the clinical doctorate has moved so rapidly that the quality assurance agencies do not have reliable or valid evaluation tools to ensure the institutional quality of specific programs. North Central Association of Colleges and Schools (2005) established a task force on the professional doctorate, but specific guidelines have not been finalized.

Several studies were policy-focused, with emphasis on governmental regulations, accrediting procedures, and institutional responses on a macro-level. Schray (2006a)

acknowledged the relationship between the accreditation industry and the federal government as a noteworthy example of a successful public-private partnership. Schray explained that the federal government uses the non-governmental accreditation to identify institutions that are eligible to receive federal student financial aid and other federal funds. Similarly, Eaton (2006) noted that this relationship has yielded a reliable and effective process to provide quality assurance to one of the most respected higher education systems in the world. Likewise, Hunt (2009) explained the accreditation-federal government relationship allows for a balance between institutional autonomy and accessibility with robust accountability standards to societal stakeholders.

Eaton (2009) noted that the federal government recognition process of accreditation agencies is funded through Congressional budget allocations to the Department of Education. The 1965 Higher Education Act (HEA) was designed to strengthen American colleges and universities. Each re-authorization of the HEA, most recently 2008, has included additional institutional and program accountability measures (American Council on Education, 2008). Bardo (2009) stated that, because of the connection to HEA Title IV financial aid and accreditation, institutions will be required to reorganize their structure and must allocate additional resources on assessment, reporting, and accountability measures. In 2008 the Higher Education Opportunity Act (HEOA) was passed, increasing the governmental pressure with regard to accountability from accreditation (CHEA, 2011). Brittingham (2008) argued that the strengthening control of the accreditation process through governmental policing has raised concerns that the non-governmental voluntary process of educational accreditation may be in jeopardy. The complex relationship between the private accreditation industry and the federal government, which in turn controls federal funding to institutions, is important to

the success of academic institutions and educational programs.

In contrast to these studies that are generally all macro and related to compliance, this research was more micro, based on empirical data (interviews) with much personalized retrospectives on these larger processes. This study provides details on how policies generalized to higher education influenced the process of the transition to the Pharm.D. and the institutional response to the mandate.

***Theme: Schools that established the educational model of the Pharm.D./medical school had an easier time with the transition.*** One key factor in the success of the transition expressed by several respondents was collaborative interdisciplinary training. Concurrently, the conversation of team-based collaborative healthcare education was occurring in other health care disciplines. Although the conversation of interdisciplinary education is occurring among many health disciplines, this study provides empirical data that the specialization of content is a problem for health professional schools. The respondents concluded that the logistics of integrating 140 pharmacy students together with 200 medical/nursing students is overwhelming at the institutional level. A respondent explained that, at his affiliated school, integrated education has been accomplished. Another respondent said his institution does not have a medical school, but they have partnered with other universities, progressing toward more integrated learning.

An additional respondent gave details that get to the root cause of the difficulties establishing interdisciplinary education among health professions. At his affiliated institution, nursing did not want the Pharm.D. They were taught that only nurses could teach nurses, a mindset that permeates in other disciplines as well. However, a different respondent is confident that this is changing, but ever so slowly.

Previous studies have emphasized the importance of interdisciplinary learning in other health professions. Wall et al. (2005) stated that the most unique feature of the DNP program at PUSON was interdisciplinary collaboration supported by all levels. Similarly, Rapport et al. (2007) highlighted that one of the most significant changes in the DPT program at the University of Colorado at Denver and Health Science Center has been to provide opportunities for interdisciplinary collaboration. In addition, Clark (1999) concluded that, in preparing students to work in health care teams, interdisciplinary practice signifies a higher order of integration of perspectives and collaboration necessary for effective patient-based care. Similar to these studies, this work confirms that interdisciplinary education is theoretically significant but adds that there are variables that prevent the implementation of interdisciplinary learning from becoming mainstream.

***Theme: It was a struggle to create another position called clinical faculty. This position was necessary because of the inclusion of the experiential component that was added to the curriculum.*** Respondents concluded that this was a challenge at the institutional level, an issue that was handled differently at each individual school. Several respondents expressed that this was a significant concern in pharmacy schools. This finding represents new insights, with the author finding no literature that addresses this concern in pharmacy education or in other disciplines moving toward the clinical doctorate.

How the clinical faculty issues evolved can have very real consequences for practice. The hope that the status of a professor in the area of pharmacy practice or pharmacology at a specific institution would benefit from equivalent status did not hold for all institutions. A respondent said that, at one research institution, the Pharm.D. faculty were prohibited from chairing a dissertation committee. Such institutional

realities reflect real differences in prestige and hierarchy within the academic world. It is noteworthy that this type of information about the resistance to change and the sometimes subtle yet powerful forms it took (such as differences in role structure and responsibilities) that are loaded with implications for stature, tenure and promotion, and even salary, in the academy--are never addressed in the policy-focused position papers and commentary that constitute the bulk of the writing pursuant to the transition to the Pharm.D.

***Theme: Originally, a shortage of clinical faculty in the Pharm.D. programs existed. A major challenge for the programs was obtaining additional clinical faculty.***

Tennant (2004) suggested that universities are challenged by the transformation required to meet the needs of the professional doctorate outside the traditional academic structure. Expanding on this, respondents explained that the commission recommended that the clinical component of pharmacy education be modeled after medicine. Respondent perspectives of the situation pointed to a problem rooted in academic accreditation that was not evident in the author's review of the literature.

One respondent explained that, when the early adopters were developing Pharm.D. programs in the 1970s, federal money was available to hire clinical faculty if the institution converted to more clinical education, but that did not last long. Evidence of dual track appointments are implicit in the interviews for this study. For example, at many institutions clinical faculty are not responsible for obtaining federal grant money, which is the responsibility of the research faculty. Conflicts loom because, at the same time, there is mounting pressure for institutions to get federal grants and do research. It is noteworthy that this type of information--about resistance to change and the sometimes subtle yet powerful forms it took (such as differences in role structure and

responsibilities) that are loaded with implications for stature, tenure and promotion, and even salary within the profession--are never addressed in the policy-focused position papers and commentary that constitutes the bulk of the writing pursuant to the transition to the Pharm.D.

Several respondents noted that pharmacy schools made the accreditation changes look good on paper because it was a mandate but put little effort into implementing the changes. One respondent shared that, at his affiliated school, the clinical faculty have been outsourced to busy practitioners in different practicing settings and are not full time. This is compliant with the accreditation standards, appears high-quality on paper, but allows the school to move position openings from department to department, allowing for more research faculty resulting in potential federal support. These actual examples of how the clinical positions were defined and treated relate back to the discussion on whether the experiential component of pharmacy education is effective in the student learning outcomes or program objectives. This study suggests that budget, expediency, and traditional views on research and tenure may have influenced the focus on clinical teaching per se.

In the early days of Pharm.D. programs, qualified clinical faculty were in short supply. Many respondents recall Pharm.D. graduates completing a residency and then obtaining academic jobs. The author found no theoretical basis nor empirical treatment in the literature on how this influenced the quality and/or quantity of programs, but the respondents recount this as being a major concern at the time.

Documented in the literature is that many professions are considering transitioning to the clinical doctorate, and it is expected that faculty be at or above the level they are teaching. Clement (2005) suggested that one measure of quality



improvement in professional programs is increasing numbers of doctoral prepared faculty. This required additional faculty who had practical experience and could be effective in the classroom. In pharmacy education, the ACPE accreditation standards require the clinical component and hence, the increase in clinical faculty. This study emulates these facts, but the findings expand the understanding that many schools were challenged, and still are, to find experienced faculty to fill these positions. Further, within the schools, tensions developed over the role definitions of these new clinical positions vis-à-vis their responsibilities, rank, and stature within the institution. The interviews suggest that these institutional conflicts sometimes held sway over concerns about quality of education.

***Theme: An issue faced by the schools is how to treat these new academics in terms of getting them promoted.*** Respondents noted that this was a chief concern at the institutional level and dependent upon the culture of the university. Practicing clinical pharmacists were necessary in the academic setting, but the traditional norms of promotion in academic institutions are based on research funds and publications for which the practicing clinical pharmacist was not responsible. In addition, respondents emphasized the difficulty with this situation and the challenges to find solutions. Although the circumstances have improved with time and better understanding of how to operate, this issue remains a contentious topic at many institutions that have clinical training as part of the curriculum. This finding represents new insight into the internal struggles at the institutional level, with the author finding no information related to this in the literature.

***Theme: Within the schools and colleges of pharmacy, the biggest opposition was the basic science faculty.*** Respondents indicated this was a major cause of discourse;

in contrast, the author found no empirical evidence of this in the literature.

Upgrading pharmacy education curriculum to Pharm.D. standards and retaining the resources to meet the needs of the new curriculum required a major change effort at the academic level, and many academics do not like change. The ACPE accreditation standards required that pharmacy programs establish a pharmacy practice constituent, and basic science faculty had difficulty understanding the role of this new entity or the consequences from their contributions. Respondents explained that basic science faculty did not identify with the Pharm.D. or value the increase in knowledge, skills, or abilities of the graduates. The details of the interviews expose that the discussion continues in academic circles today, with those who still see no reason for all graduates to have the Pharm.D.

**Fourth pattern: Institutions making the conversion to the Doctor of Pharmacy degree were met with external resistance with respect to the practice of pharmacy.** The respondents conveyed eagerness to address the issues related to the resistance present from external stakeholders regarding the transition to the Pharm.D. A few provided firsthand knowledge regarding the debates and dialogue that occurred during the sometimes personal confrontations that occurred. These reflective perspectives are detailed in the following themes and provide new particulars at the core of the issues.

***Theme: There was opposition within the profession as well as that within universities.*** Several respondents emphasized that the AACP conducted a strategic crusade to initiate discussion with the professional organizations and stakeholders, trying to attain some consensus to move them forward with the Pharm.D. One respondent believed the AACP was successful in obtaining buy-in from many leaders within professional organizations who went back to the members and explained this was the best

thing for pharmacy, emphasizing that it was going to be the best thing for patients. This person clarified that not everyone agreed and some continued to campaign against the Pharm.D.; looking back many realized, however, that it has been the best thing that happened to pharmacy.

Another respondent commented that a few of the pharmacy professional organizations did not support the Pharm.D., most notably the National Association of Chain Drug Stores (NACDS). The literature provides considerable background for this theme. For example, professional associations have several complex roles: advocating for the individuals within a profession, protecting public interest by regulating these members, and representing the professional interest in legislative concerns (Friedman & Phillips, 2004; National Institutes of Health, 2011). Professional associations play an important role in times of change within a profession because they have the capability to initiate debate and endorsement, campaign for practice improvement, and advocate for policies that protect society (cf. Greenwood et al., 2002; Lalonde, 2010; Macpherson, 2010). In most situations members pay dues and membership fees in exchange for services, benefits, and professional opportunities (Gruen et al., 2000). Pharmacy is represented by about 37 unique professional organizations, each representing a particular segment of the pharmacy profession. This study provides new insights into the details surrounding the opposition from specific professional associations and how the debates were presented on a political platform.

***Theme: Many of the people who held a Bachelor of Science degree (B.S.) in pharmacy as the main credential for a lifelong practice as a registered pharmacist were facing a choice.*** To be registered to practice, pharmacists must have a license. This requires completing a standardized examination, regardless of the academic degree, that

is recognized by each of the 50 states. The respondents expanded that when the Pharm.D. mandate was implemented; questions surrounding the B.S. pharmacist and licensing concerns were prevalent. The choice was stark: discontinue practice or update credentials. Opponents argued that grandfathering in the B.S. pharmacist would defeat having a Pharm.D., noting that an institution grants a degree based upon specific requirements completed. One respondent felt grandfathering would be a violation of academic integrity, academic fraud. This finding supports the Lumina Foundation on Education (2010) belief that the value of a degree--both for the individual and society as a whole--depends on the skills and knowledge that the credential represents. The quality of the degree rests on the learning outcomes that can lead to further education or employment.

The importance of the appropriate credentials is discussed in the literature. Employers rely on the credentials of job applicants, and it has become increasingly difficult to decipher the wide range of academic degrees, certifications, and licenses when they evaluate job applicants (Contreras, 2004; Nemec & Legere, 2008). In addition, the National Association for Educational Statistics (2008) stated that the academic degree is progressively more sought after in all demographics. An overarching problem is that program content and completion requirements are inconsistent among degree granting institutions, interfering with the transferability of course credits (CHEA, 2001). This study finds that many of the advocates of the Pharm.D. approached this conversation by focusing on the abstract notion of the “greater good,” concentrating on the value of the degree enhancement for the profession and therefore to society. This value stemmed from the fact that society needed a healthcare practitioner who understood the actions and interactions of the plethora of drugs available; i.e., the complexities associated with many

drugs require advanced education for adequate understanding. Most B.S. pharmacists understood this argument, going on to complete the add-on Pharm.D. requirements. The compassion that led the pharmacist into healthcare in the first place prevailed; people need help and they need advice. This study confirms that the theoretical foundation of patient-based pharmaceutical care is essential, and an educational curriculum that includes the process of problem solving and communication must be completed. An individual respondent summed up what B.S. pharmacists went through:

The pharmacists that were bachelor of science pharmacists including myself, had to pass the test after we went through all of this self-imposed educational work on how to better serve our patients. I was 67 years old or something like that, but we were committed to our practices.

Such personal passion about the larger transition from dispensing medicine to pharmaceutical patient care represents new insight to the field and highlights the individual human costs and sacrifices that were made during this process.

***Theme: The B.S. pharmacists said “wait a minute”; soon people will be asking for a Pharm.D., and we are not going to be considered for some positions.*** One

respondent reflected that the decision makers were aware that making the B.S. pharmacists unhappy was a risk and hoped that alternative solutions could be made to make the transition easier. Another respondent expanded that the concern for many B.S. pharmacists was the uncertainty of their future. These outcomes provide new empirical data that supports Freburger et al. (2008), who warned leaders in disciplines contemplating transitioning to a new entry-level degree that the potential benefits, as well as the risks and available alternative, must be examined carefully. Beyond that, Elenbaas and Worthen (2009) noted that the AACP and other national associations collaborated on numerous projects surrounding the scope of practice and internal policy issues within pharmacy that led to the decision of the Pharm.D.

***Theme: The ability for pharmacy practice to evolve is dependent on the opportunities that exist in community and hospital practice settings. The responsibilities and duties of pharmacists are expanding in the work-place environment, but very slowly.*** Previously, the Janus Commission (1997) concluded that the U.S. healthcare delivery system environment was right for transformation of pharmacy practice. The Pharm.D. mandate and the change in the professional mission to pharmaceutical care were the first steps toward advancement, but external influences have slowed the success of the whole profession in becoming primary care providers.

Beyond this dated work from just after the 1992 mandate for the transition to the Pharm.D., respondents commented on two factors. One is limitation in the scope of practice from state to state. There is confidence that pharmacists will be recognized for their ability to manage patients, but it is in the hands of the next generation of pharmacists to be active in local, state, and national organizations to keep the momentum going forward. The second is the disconnect between academics and practice. The professional mission is pharmaceutical care, and the educational institutions are producing Pharm.D.s who have the knowledge, skills, and abilities to manage patients. However, if new graduates enter into a practice environment that is still product-oriented, they will quickly lose certain skills gained during the educational process.

***Theme: The educational outcomes of the pharmacy curriculum limit the roles and responsibilities of pharmacists in practice.*** The author found no evidence of this theme by other researchers. The subjects commented on pharmacy education preparing the Pharm.D. to supply and manage drugs to patients with a variety of conditions. The educational process does not train the Pharm.D. to perform physical assessment or diagnostic skills to identify diseases. Respondents then emphasized that the necessity for

each healthcare profession having a narrowly defined role/expertise, interprofessional education and a collaborative care model of patient management follows.

***Theme: The respondents unanimously agreed that the primary external opposition came from the chain drugstores and owners of regional chains.*** According to the respondents, the opposition from the chain pharmacy community, especially the NACDS, was a primary force in the resistance to the Pharm.D. This supports Greenwood and Hinings (1996) that professional associations play an important role in times of deinstitutionalization or change within a profession. In addition, Friedman and Phillips (2009) noted that, over the past two decades, professional associations are becoming strong advocates for the membership on political issues and government initiatives. The respondents' information illustrates this because the chain drugstores were becoming the primary employers of pharmacists and they were opposed to extending the length of education because it would cost them more money to hire the new Pharm.D. graduates. The NACDS was a strong voice, had a powerful lobby, and had the financial resources to fight this mandate. Respondents believed that the attempt to stop the national movement to the all Pharm.D. by the chain drugstores became the focus of the political discussion around pharmacy education for several years, providing empirical evidence on how influential the professional associations are during a time of change.

The review of the literature did not prepare the author for how the chain drugstore, through the political arena and business model, influenced the success of the Pharm.D. mandate. As previously mentioned, the thought was that if pharmacy changed the academic degree, it would take time for other health providers and the public sector to accept the new knowledge, skills, and patient care abilities of the pharmacy. A respondent noted that the products sold in most pharmacies (especially the larger chain

drugstores) reinforce the older image of pharmacy as product-based, not a healthcare service.

The respondents were polite in the conversation surrounding the chain drugstores. Many acknowledged that some are beginning to change their business model, developing patient care groups by combining nurse practitioners and pharmacists into a health center environment. In the same breath, the respondents believe they still have a long way to go and question the underlying intention of this gradual change in the business model. Several respondents mentioned that the traditional chain drugstore, even with a health center inside, is not helping the consumer understand how the pharmacist can help them become healthier and less likely to have adverse drug reactions or hospitalized because of their drug therapy. This is exacerbated because the nurse practitioner is the one with whom the patient interacts, not the pharmacist.

The chain drugstore sector was strongly opposed to the Pharm.D. and used their political and financial power to block it, so much so that the lasting imprint on the pharmacy profession may be one of distrust. This information goes beyond Carver (2001) who suggested that it is possible an organization, guided by history and circumstances, can interfere with effective governance, especially in a complex and changing environment. Dezalay and Garth (1996) noted that the decision-making process within a profession regarding boundaries, membership, and behavior can be a political process. These types of situations can have long-term consequences on relationships. Consistent with these citations, several respondents referenced the battle that the University of Maryland went through and paralleled their struggles with what was happening nationally. The respondents were reserved in providing details of the struggles experienced at Maryland. The author interpreted the reason for the respondents'



reservation was that the wounds were still too raw for those involved to discuss.

Knapp (2011) provided a firsthand account of the trials and tribulations that occurred at the University of Maryland. After the initial meetings with the chain drugstore representatives, committee members employed by the chain stores resigned and scholarship contributions from chain drugstore owners declined. He concluded that the strong opposition of the chain drugstores, posturing as large impersonal corporations represented by lawyers and executives rather than pharmacy practitioners, was an ideal opponent. The heavy-handed tactics of MACDS helped the school to rally supporters who became active and vocal proponents for change” (Knapp, p. 699).

**Fifth pattern: Recognition that the impact on students and the entire educational experience was an important factor in the decision and implementation of the professional doctorate in pharmacy.** Respondents generally agreed that the six-year Pharm. D. curriculum is necessary to provide a solid foundation of competency that a pharmacist needs for general practice, but many opponents suggest that the six-year program dilutes the quality of pharmacy training. This supports Lester (2004), who suggested that clinical doctorate programs focus on the application of theory and knowledge and produce graduates who are capable of high-level thinking, which is necessary to work in complex practical situations.

Neumann (2005) noted that traditionally there were no explicit national standards or guidelines for doctoral education as a whole but that it is a current topic in higher education today. The finding of this study strengthen Boyden’s (2006) conclusion that the two motivations that led to the Pharm.D. were uniformity across the profession and “the appropriateness of giving those with a minimum of six years of intensive, challenging didactic and experiential education, a high-level, terminal degree” (p. 160). One concern

with Boyden's finding is that the Pharm.D. is an entry-level practicing doctorate, not a terminal degree. This study differs because the respondents indicated that there was clarity among the profession that the Pharm.D. was intended to be a practicing doctorate from the beginning.

The respondents in this study provided descriptions of their affiliated schools, reflecting a wide range of diversity in program content and length. Although the Higher Learning Commission (2006) works together with the accreditation bodies to establish core characteristics of a professional doctorate program, based on uniform competencies rooted in professional practice, decisions regarding curricular content, length of study, and experiential practice are left to the autonomous universities. In addition, Royeen and Lavin (2002) argued that there is no consistency among the different programs related to length, rigor, content, or the usefulness to the person who achieves them. This is true in the pharmacy profession, as is confirmed by the respondents in this study. One example is the description by Kontogianes (2008) of a unique Pharm.D. program that takes the student straight from high school seamlessly to the doctorate in six years. Other programs require a four-year B.S. degree as a prerequisite as a requirement for acceptance into the program.

***Theme: A student can't go through this program without going full time and having a structured curriculum.*** One area not discussed in the literature is how the move to the Pharm.D. would impact the student. Several respondents concluded that one benefit of the Pharm.D. is the improved professionalization of new graduates. One respondent believed this has been a powerful benefit to the profession, although it had not been expected. Students are exposed to the professional role, set of functions, practice activities, and job descriptions during the experiential portion of the educational process.

The time spent working together with the pharmaceutical cohort and exposure to deliberation with other professionals in the experiential portion has equipped the graduate to work in any environment because they understand the value of working together. This new insight could help increase both public and policy maker acceptance of the transition toward pharmaceutical patient care and the key role of the Pharm.D. graduates as this occurs. The reflective approach of this study resulted in novel facts that support O'Brian (1992), who explained that part of the transformation that occurred at the institutional level was that professional degree programs were adapted to offer courses in professionalization.

***Theme: There is a sense that to differentiate themselves now, new graduates have to go through residencies or obtain certifications.*** A few respondents believed that a residency is not appropriate for all students, mainly because it is expensive. As previously mentioned, the respondents concluded that the six-year Pharm.D. curriculum provides the graduate a solid foundation for general practice. Other respondents consider six years to be not enough time to train an infectious disease specialist or a cardiology specialist. In order to specialize in a specific concentration, a residency is necessary. This finding relates to Collier (2008), who suggested that employers and educational leaders must consider the increasing degree levels and certifications as they relate to workforce dynamics and the cost of healthcare.

***Theme: The type of student attracted to pharmacy is part of the problem.***

The respondents universally agreed that many schools have made changes to the admissions process to recruit candidates who have the capability of being independent, critical thinkers and are passionate about patient care. Emphasis on leadership skills and the ability to communicate has increased, while dependence on test scores and grades has

decreased. Some respondents sense that, although schools are recruiting better-rounded students, as students go through the program they resort back to the old way of thinking, “tell me what I need to learn and I will do it.”

This disconnect can be attributed to the student motivation, but some respondents and authors from the literature place the responsibility on the faculty. The respondents that are affiliated with pharmacy programs believed that many curriculums are still using the “talking head method” of educating students, not teaching the students how to go about the learning process, how to become self-disciplined learners. One respondent emphasized that it is the educational institution’s responsibility to produce graduates who are independent, critical thinkers, and problem solvers. The complexities of medication and drug therapy are changing so rapidly that new graduates have to become lifelong learners. These findings support Holland and Nimmo (1999b), who identified two main factors that contribute to an individual pharmacists’ responsiveness to the change in practice: their personality and their professional socialization. Goldenson (as cited in Holland & Nimmo, 1999b) defines professional socialization as the process in which a student or young practitioner develops the roles, behaviors, and attitudes expected of a member of the specific profession. Faculty members, preceptor/internship experiences, and fellow students influence professional socialization.

Before the Pharm.D., a recruit typically did not want to work directly with people. Since the Pharm.D., the student is more interested in the sociology of healthcare, but is still more focused on learning about the science of disease and the pharmacology of treatment. As mentioned earlier, a respondent believed that an unexpected benefit of the Pharm.D. was the improved professionalization of new graduates, and many respondents shared this view.

Holland and Nimmo (1999b) believed that the new patient-based practice model of pharmaceutical care requires changes in responsibilities and duties that may not be compatible with a pharmacist's personality. As discussed, there has been a shortage of qualified pharmacists to fill the faculty requirements at many schools. The respondents concluded that new graduates are completing residency programs, where they just begin to learn how to practice and are then hired as clinical faculty. Several respondents expressed concern that limited practice experience by the new clinical faculty may be a contributing factor to the slow professionalization of the student.

**Sixth pattern: The changes in pharmacy education curriculum as related to academia have been an evolution, not a revolution.** Many respondents believed the turning point in the curricular advancement was the establishment of the AACP Commission to Implement Change in Pharmacy Education in 1989. The details of the interviews describe the attempt to improve pharmacy education over the years; but prior to the mandate, the focus was on the number of credit hours and length of the program instead of the quality of content in the program. These findings reinforce Elenbaas and Worthen (2009), who noted that curriculum improvements have been at the forefront of pharmacy education since the 1948 Elliott report concluded that the four-year curriculum was insufficient enough to provide the scientific content of the profession and the general education component of a post-secondary education. As the nature of professional practice changed, the conversation was framed primarily on the number of credit hours and not on outcomes or required competencies.

***Theme: The ACPE developed the add-on Pharm.D. to allow B.S. pharmacists to upgrade their credentials.*** Respondents emphasized that a significant conflict surrounded the necessary content in an add-on Pharm.D. curriculum to prepare a licensed pharmacist,

with less than a Pharm.D., for best practice standards of the new pharmaceutical care model. The respondents provided actual details regarding the debate over the Add-on Pharm.D. For example, one respondent described that, at an age when he should have retired, he decided to complete the requirements for the Add-on Pharm.D. so he could continue in private practice. The author did not discover any theoretical or empirical studies in the literature that addressed the extent of this debate or the decision-making process that was finally agreed upon regarding the Add-on Pharm.D.

***Theme: The complexity of drug interactions is rising and it is necessary to educate pharmacists to reflect this with skills in patient counseling.*** The trend toward having pharmacists with the skills to communicate and educate patients is still in its infancy. Respondents note that over 50% of patients take medications, and it is becoming increasingly important for new graduates to have the skills to communicate with patients about the dangers/importance of side effects or possible interactions with other medications. Some respondents believed the responsibility to teach patient-counseling skills rests in the Pharm.D. curriculum. This contributes to the reason why pharmacy programs are recruiting a different kind of student and establishing a new mission in educational outcomes, as this study addressed earlier. These insights are consistent with, but go beyond, the work of Brazeau et al. (2009b) who revealed that the 2008 AACP Curricular Change Summit centered on the transition from educating pharmacists with a product focus to educating pharmacists to provide patient-based care. This study finds that the magnitude of advancements in pharmaceuticals and drug management established a societal need for pharmacists to become patient-centered in order to help individuals understand the complexities of medicinal therapies.

***Theme: The changes wrought by the new Pharm.D. required extensive debate***

*about and changes in pharmacy curriculum and instruction.* Many respondents emphasized that the ACPE accreditation standards and the AACP Commission to Implement Change background papers were distributed to all Pharm.D. programs as guides to develop a curriculum that would be in compliance. The respondents noted that institutions were given eight years to prepare for the required Pharm.D. curriculum, which they felt was an ample timeframe. This created major conflict at the administrative and faculty level. As the respondents explained, debates over curriculum are always difficult, but when they are focused on significant changes in the course of study, the debates are some of the most vicious of all academic disagreements. One respondent believed the reason is because the arguments are so important to the individual faculty who are so dedicated to particular courses that they teach within the curriculum. The details of the interviews indicate that this debate is guided by emotion and subjectivity by the individual faculty, when it should be directed by policies and objectivity related to the best interest of the program and profession.

Discussions surrounding curriculum mapping and content are on a continuous cycle in the academy. Many facets go into the decisions regarding program content that, many times, make these conversations difficult and complex. The results of this study support that the discussions are guided by the objective standards set forth by the accreditation body. The accreditation process is the means of assuring and improving quality of educational institutions and programs in the U.S. (CHEA, 2010c).

The current study provides personal retrospective on the policy groups and commission papers that frame the transition to the clinical doctorate in pharmacy. The accreditation governing body is the Accreditation Council on Pharmacy Education (ACPE). The insights from this study support Eaton (2009), who stated that the

accreditation agency works together with state licensing boards and professional associations to set curriculum standards that are changed and improved based on the changes occurring in professional practice. In addition, data from the 2000 National Pharmacist Workforce Study described a “dynamic shortage of pharmacists” resulting from several factors including an increase in prescription drug use, expansion of pharmacist’s role in the job market, and limited use of automation (Cooksey et al., 2000, p. 182). Therefore, the AACP Commission to Implement change in Pharmacy Education developed a strategic plan to establish standards for pharmacy education in the 21st century (Miller, 1989). The same year the ACPE mandated the Pharm.D. as the sole entry into pharmacy practice, implementation beginning with the class of 2000.

The commission produced seven background papers, the first focusing on curriculum and instruction (AACP, 1997a). In 1992 the third background paper recommended that AACP endorse the Pharm.D. as the sole entry-level degree, resulting in the AACP House of Delegates vote in favor of the professional doctorate as the sole entry-level degree (AACP, 1997a). Soon after, the ACPE reworked that accreditation standards and guidelines for the Pharm.D. degree program. The standards have been revised in 1997 and 2007. Again, what is distinctive about the current study is the insight into how these changes were implemented and the resistance to change that inevitably accompanies major transformations and curriculum.

***Theme: The Commission to Implement Change did not approach this conversation from the standpoint of whose material was going to be deleted. It was far more concerned with how the program could obtain what was needed or a curriculum to reflect the nature of the practice of the profession, and to do this in a reasonable period of time.*** The respondents emphasized that the Commission to Implement Change



attempted to focus on the objective guidelines for the transformation and remain neutral to the subjective decisions of the specific material that would be altered. This finding is new information that explains the commission's approach to the debate. The responses supported the conclusion that, with the required knowledge of the Pharm.D. increasing at such a rapid rate, the big picture became how to fit that much education into an efficient timeframe. At the institutional level, this continues to be a challenge. At the 2008 AACCP Curricular Change Summit, AACCP President Yanchick stated, "We must transform pharmacy curricula away from a baccalaureate-level focus to a professional doctoral-level focus" (cited in Brazeau et al., 2009b, para. 2).

***Theme: The combination of new requirements in content and knowledge for the Pharm.D. as well as necessity of background understanding of science has led some schools to institute a pre-pharmacy program requirement of up to three years.*** The respondents noted that an increasing number of schools are requiring foundational courses for entry into the pharmacy programs. Because there are no accreditation standards or guidelines of what constitutes the pre-pharmacy curriculum, the length of time for completion ranges from none to three years. Several respondents stated that these prerequisites, plus the six-year pharmacy program, could total up to eight years before graduation. One respondent raised this concern regarding the length and cost of pharmacy education relative to the benefits and opportunities available in practice. Similarly, Freberger et al. (2008) argued that the additional time requirements and financial commitment of education are unnecessary, potentially leading to a shortage in the labor force. In addition, Engel (2000) acknowledged that educational institutions are charged with providing the quality of professionals that will meet the healthcare demands of our society, but the economic concerns of the institutions must be balanced with the cost

incurred to educate the professional and the career opportunities that are available.

***Theme: One result of institutions being required to bring in additional qualified people to implement the revised programs has been a rise in tuition.*** The respondents indicate the ACPE accreditation standard of more clinical faculty is directly related to the increase in tuition of pharmacy education. The factors contributing to the rising cost of healthcare and the rising cost in education are two mainstream conversations in the U.S. Yet, the author discovered no studies that address this relationship in the review of the literature. All decisions about changing credentials and degree requirements involve trade-offs. These should be addressed explicitly; the current study represents a first step for this particular problem.

***Theme: Not one grand scheme, template, or module exists to follow. A formal, strategic plan was not developed to assist institutions through this paramount change process.*** The respondents concurred that an organized plan was not devised to communicate these changes, neither to the broader community of health professions nor to the public. The change was made at the educational level, and the value of that change to other stakeholders could only be appreciated with time.

Over time, more students were opting for the Pharm.D. degree and more clinical programs were developed. The workplace response was seen primarily in the hospital setting, hiring more Pharm.D. graduates than bachelor's graduates. One respondent served on a Pew National committee that was focused on the roles of various disciplines within primary care, workplace needs, and the changing climate of the healthcare delivery system. A different respondent explained that conversations leading up to the ACPE mandate were extensive and inclusive, both internally and externally. Dialogue centered on where the profession should be and what it could be. Accordingly, by the

1989 ACPE mandate that Pharm.D. would be the sole entry-level degree for pharmacy practice, 18 schools had already established the Pharm.D. programs; and pharmacy practice, at least in the hospital setting, was acknowledging the advanced degree. This same respondent noted that this required acknowledgement of the degree by many stakeholders, and it was messy.

Once the ACPE mandated the Pharm.D. and issued the revised accreditation standards, each institution had the freedom to develop the curriculum and overall program autonomously, as long as they were compliant with the parameters of the new Pharm.D. set forth by the ACPE. Some of the parameters, such as the addition of clinical faculty, were costly and there was no direct financial support to individual schools from accreditation agency or the professional associations. The respondents indicated that they are satisfied with the support that both the ACPE and the AACP gave academic institutions in the implementation of the Pharm.D.

Beyond earlier treatment at a more global nature, the current study provides much more detail and reflects back on events as they occurred. For example, O'Brien (1992) concluded that the growth in practitioner-oriented education has expanded the landscape of graduate and doctorate level education. This transformation occurred at the institutional level, at an institution-by-institution basis, making the professionalization of the graduate degree more complex. More recently, Eaton (2009) discussed academic accreditation defining four responsibilities in the mission: ensure quality assurance, provide access to federal and state funds, stimulate society's confidence in higher education, and support transferability. Institutions accredited by the organization pay annual dues and fees to the accrediting agencies for the accreditation appraisal (Council on Higher Education Association, 2010; Schray, 2006a). In the U.S., the accreditation

process is rooted in self-regulation, relying on institutions to assess themselves against a set of standards (Brittingham, 2008; Eaton, 2009). In pharmacy, the ACPE gave support by providing documents related to the standards, the structure of the curriculum, and a significant timeline for completion.

According to Carver (2001), professional associations such as the AACP have dual responsibilities: representation of the particular profession and regulation of the profession. They are non-profit organizations funded by the investment of members through payment of dues and membership renewals and rely on member participation to fulfill these responsibilities (cf. Bhattacharya, 1998; Gruen, 2010; Morgan & Hunt, 1994). During the timeframe 1989-2002, the AACP had strong, active, and dedicated members that resulted in an effective organization (Gruen, 2010; Wilson, 1998).

Greenwood et al. (2002) concluded that, through the seven background papers, the AACP Commission to Implement Change in Pharmacy Education provided a strategic plan for the implementation of the Pharm.D. which represented the interests of the membership. This study supports that, once the professional beliefs and practices were established, the AACP played an important role in advocating value and monitoring compliance through routines such as providing seminars and intellectual support to the schools and professional development for practitioners (cf., Dezalay & Garth, 1996; Greenwood et al; Lalonde, 2010).

### **Research Question 1b**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

#### **b. the delivery of service?**

There was considerable debate regarding the Pharm.D. as the sole entry-level

degree. Many opinions were voiced in publications about the effect of the Pharm.D. on delivery of service. To the author's knowledge, very few theoretical or empirical studies have been published on the effects of the Pharm.D. on the delivery of pharmacy services.

**Seventh pattern: The success of the transition from product-based to patient-based pharmaceutical care is not consistent throughout the U.S. healthcare system.**

In the current study, the unevenness of the process of transition was obvious in the series of themes that follow, from variation by state to utilization in hospitals, as well as geographic and community differences. A constant across all of these is that local context, combined with inevitable variance in commitment to and approach from the faculty at each pharmacy school, produced trajectories of change that differed by efforts at compliance, emphasis, substance, innovation, scope, and pace.

In contrast, the author came across no literature that acknowledges there was inconsistency in the change in practice philosophy throughout the U.S. Some representative literature is noted for comparison. Elenbaas and Worthen (2009) concluded that the results of the 1946 Elliott survey found that the pharmacists believed there was a professional nature of pharmacy, but that the general perception was much less. The results from the 1967 study by the Task Force on Prescription Drugs indicated that society's perception of the pharmacist was primarily product-based, supplying pills and calculating the cost, but did acknowledge those pharmacists who were providing patient care, primarily in the hospital setting. Elenbaas and Worthen concluded that, through the 1970s and 1980s, the clinical pharmacy concept was becoming rooted in the practice model; and the Pharm.D. degree was gaining steam, but they were not synonymous.

***Theme: With the introduction of the Pharm.D., the role for the new clinically***

***trained pharmacist expanded rapidly in hospital settings.*** The respondents concluded that the introduction of the Pharm.D., based on what the early adopters such as UCSF had done, demonstrated the value of the pharmacist in the clinical setting. This was nurtured in the hospital setting but was not embraced in the community setting. These findings are new to the field, as the author did not uncover publications in the literature review that discuss the effects of the Pharm.D. on hospital practice versus community practice.

***Theme: The advancements in the delivery of services and the scope of practice are dependent on geographic location.*** The respondents indicated that the delivery of pharmaceutical services is noticeably different in certain regions of the country.

California requires that a pharmacist who fills a prescription must give advice to the patient, while the Northeast has been slow to make the transition to clinical care. Again, these are new findings; the author did not locate any literature that addressed differences in pharmacy practice based on geographic distinction.

***Theme: State regulations regarding the scope of practice of pharmacy are widely varied throughout the country and have a direct impact on the delivery of services.*** In the United States, licensing of health professionals and regulation of practice standards are administered by a division of the state government. The state bureaus work together with the education accrediting agencies when developing a profession's scope of practice within the particular state (cf. Hawkins et al., 2009; Head, 2006). In 1998 the Pew Commission recommended that congress pass legislation that facilitating uniform scope of practice in each profession that would be transferable between states. Regarding these findings from the literature, respondents noted that a few states have endorsed collaborative steps, primarily in bordering states (Washington and Oregon, Kansas and Nebraska); but the efforts have been slow to develop across the U.S. A national approach

to the licensing of health professionals would improve consistencies in competence and performance standards across state lines (Hawkins et al., 2009; Head, 2006; Wakefield, 1999). One respondent believed the resistance to a national approach goes back to the Civil War and states' rights. He acknowledges movement toward national guidelines has occurred in specific situations, but each state will always have the right to license professionals within their borders because of history and the foundation of this country.

***Theme: There appears to be a relationship between licensure, state governments, and the protection of salaries.*** Many respondents expressed the opinion that changing the scope of professional practice within a state is rooted in politics, and the political arena is centered on control and money. The respondents discussed that the political lobbying occurred within the pharmacy profession with respect to the Pharm.D., primarily from professional associations. One respondent indicated that lobbying groups representing a specific profession (i.e., medicine, nursing, physical therapy, chiropractic) attempt to limit the scope of practice of other professions at the state level. In contrast, the author did not discover literature that speaks of the political environment related to the conversations about health professions scope of practice.

***Theme: One issue that makes pharmacy unique is that it is the only profession in which two sets of licenses are required: the practitioner who has the license and the space or facility in which the pharmacist works.*** Respondents spoke to this dual licensure, in large part due to the reality of the pharmacy industry being responsible for the distribution of prescription drugs, which carries specific and unique rules and regulations by state and federal regulators. Once again, these findings are new regarding the complexity of how licensure affects the delivery of services, with no other literature found on the issue.

**Eighth pattern: Finances play a major role in changing pharmaceutical practice.** While this theme may be obvious, the focus in the field was on changes in education and practice. Yet for any business, the bottom line is the cost-benefit model. In the area of healthcare this relates to how much individual time it takes to care for a patient and the amount of reimbursement for that time. According to one respondent, this is a conversation that is avoided by health professions because the orientation of cost-benefit ratio is product-based, not *value of time* based. This is one of several issues for which the Affordable Care Act (2010) represents the beginning effort to transform the healthcare system in the United States.

***Theme: A primary player is the pharmaceutical industry.*** The author did not discover literature that speaks directly to how the impact of the drug companies' profit margin impacts the delivery of pharmaceutical services. Several respondents explained that drug manufacturers exist as business entities, concerned with the cost benefit of producing a particular drug. It is a unique situation, because they make a profit based on how much product (drug) is sold at the hospital and community pharmacy level. When the price of a drug is set, the profit for the pharmacy or hospital is included, as is the profit margin for the drug manufacturer. One respondent clarified that, in hospital or community pharmacy, the largest financial item is the cost of drug products; but the dispensing fees and insurance reimbursements continue to be restricted, resulting in declining profit margins for both the pharmacy and the manufacturer. Drug companies find avenues to maintain their profit margin, creating internal problems for providers who deliver the medicine.

***Theme: The business model of the chain drugstores limits the roles and responsibilities of pharmacists in practice.*** The respondents articulated that a large



percentage of pharmacists are in community practice, primarily in chain drugstores. The business model of the chain drugstores is product-based because the revenue stream is dependent on dispensing drugs. The author got the impression that the respondents did not put blame on the chain drugstores, because they are seeing changes occurring as a result of a transformation in healthcare and healthcare initiatives. On the other hand, one respondent believed that the whole healthcare system is already so expensive and resists increasing costs by adding pharmacy services.

The respondents seemed to direct responsibility on the third party payers. There is no incentive for chain drugstores to change their mode of operation because there is no significant revenue stream for clinical services in the community setting. The reality is that drugstores need to make a profit and the current community practice model is extraordinarily efficient and effective for distributing drug products. That point is clearly important. But in opposition to the dispensation of medicines, the transition to a pharmaceutical care model has been and continues to evolve, albeit slowly. The author is unaware of literature that addresses the relationship between the chain drugstore business model and its limitation on changes in pharmacy practice.

***Theme: In the attempt to modernize the pharmacy practice from a product-oriented to a patient-oriented profession, one concern was how pharmacists were going to get paid for the advanced services.*** Respondents explained that Medicare is the leader in establishing third-party reimbursement models. Medicare Part D set pharmacy reimbursement to be the price of the drug based on the cost of the ingredients plus a dispensing fee; insurance companies followed suit. One respondent described that, now that this is being ratcheted down, the concern for pharmacy reimbursement is becoming an important and immediate issue. This new information parallels Cohen (2008), who

concluded that, for pharmacists to realize their full potential in the U.S. healthcare system, serious reform and revised payment systems are needed that distinguish the value of time spent in patient care from dispensing.

***Theme: A limiting factor is that an organized system for compensation for services has not been established.*** The Affordable Healthcare Act (2009) contains initiatives related to reimbursement to pharmacists for cognitive services and medication therapy management services. Many respondents explained that these new guidelines, designed to provide quality care at the most reasonable price, are misplaced. When medicine is managed properly, costs decrease and patients are healthier. One respondent explicated that the current initiatives emphasize utilization of low cost medicines, such as generic brands, rather than instituting methods that produce affordable drugs and services. Several respondents noted that the incentives are backwards, and this has unified professional organizations that were at odds in the 1980s, to advocate for a system that pays attention to the human side of care.

The respondents explained that reimbursement methods for hospitals are even more complex. In the current reimbursement model, savings on drugs are not included in the “patient outcomes” that reflect saving lives, etc. Pharmacy reimbursement is related directly to the product, so there is no incentive for the hospital to advocate for cognitive services to be reimbursed. The detail provided in these interviews provides new understanding of the complexities of the healthcare reimbursement model that accentuates what Cohen (2008) concluded, that if pharmacists are to realize their full potential in the U.S. system, serious reform and altered payment systems that recognize value of time spent in patient care are necessary, rather than just dispensing medicines.

***Theme: The current third-party reimbursement model does not provide***

*incentives for pharmaceutical care.* The current third-party reimbursement model for community pharmacy is product-based. One respondent advised that a system of reimbursement for professional services (i.e., time) will need to be established before pharmaceutical care can be implemented in the community setting. The hospital reimbursement policies are independent from the community pharmacy. Many respondents acknowledged that this is a difficult situation, and the professional associations need to advocate the value of pharmacists in saving lives and saving money. One respondent proposed that the professional associations should advocate for transformation of the third-party payment model. This new information supports Greenwood et al. (1996), who concluded that professional associations play a vital role when a profession is going through a change process. The researcher is unaware of published literature that addresses the challenges with third-party reimbursement and the influence on the delivery of pharmaceutical services.

#### **Research Question 1c**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

##### **c. interdisciplinary relationship of practicing physicians?**

The following patterns and subsequent themes encapsulate the perceptions of the subjects related to the interdisciplinary relationship of the Pharm.D. and other disciplines.

**Ninth pattern: Professionals in the U.S. healthcare system are strongly resistant to change and seek evidence-based research that a change is necessary. With respect to how the other fields responded to the changes happening in pharmacy, evidence is growing that an interprofessional, team-based approach to patient care is the best-practice model.** The respondents supported the ACCP (2002)

position that the transformation of pharmacy practice is an encompassing process requiring collaboration from all segments of healthcare workforce and an inclusive approach for adoption. Several subjects suggested that the U.S. healthcare delivery system has been moving toward inter-professional collaboration in patient care, but health professionals expect evidence-based research that proves the need to change. One subject pointed to the fact that the Commission to implement change in pharmacy education, in background paper 3 [Commission to Implement Change in Pharmaceutical Education, 1997c], provides evidence of a societal need for pharmaceutical care to be the practice model.

The Transtheoretical Model of Health Behavior (Kraft et al., 1999) divides the process of change into three stages: pre-contemplation of the change, motivation and intention to change, and maintenance that includes absorption of the new behavior. Currently, other health professions (i.e., physicians, nurses, etc.) are still moving through these phases of change related to their relationship with the Pharm.D., yet how they blend into the delivery system is unknown because these changes are still in their infancies. The details of these interviews provides empirical data that supports the IOM (2000) report that concluding that the expanded role of the pharmacist in patient care will require changes in the structure and processes in which health professionals and organizations function.

***Theme: The pharmacy profession did not have a strategic plan to inform the other stakeholders; however, there is a slow but continual acceptance of the abilities of the pharmacist.*** This theme represents an important finding from this study. During the decision-making process, the AACP reached out to other professional (i.e., nurses, physicians, audiologists, etc.) to participate in the discussions but did *not* develop a prior

strategy to educate other health professions on how the advanced knowledge and skills would benefit the collaborative healthcare team. The leaders initially focused this major change effort on educating pharmacists differently to provide better patient care outcomes, but not much past that. Now that the Pharm.D. education has been solidified, many respondents indicated that the profession needs to become progressive about its place on the collaborative care team by educating other professionals about the value of the pharmacist as the expert in medications and their proper use.

The respondents were realistic that this will not be an easy task, possibly facing more resistance than that which occurred in academia. Patterns three and four that dealt with resistance within academia have their parallel in the arena of practice. One respondent commented that, “I have little hope of seeing that change radically in my lifetime. That is the next decade.” Regarding these pessimistic findings, Wall et al. (2005) reported that it can take up to 20 years before scientific findings become part of bedside practice. The clinical doctorate programs based on interdisciplinary, evidence-based education attempt to take *transitional knowledge* from research institutions to practicing professionals, significantly reducing that timeframe. However, without explicit strategies that go beyond the research on the pharmaceutical issues, both political and practice-based, these changes will not be easily or widely embraced.

***Theme: There is a trend in the healthcare delivery system toward a collaborative care model.*** Respondents indicated that the changing healthcare delivery system toward a collaborative care model will require primary healthcare providers to be partners in promoting health and preventing disease. They emphasized that health professionals must learn how to work in a collaborative team environment, starting at the early stages of the educational process. These explicit comments reinforce Wall et al.

(2005) who concluded that opportunities for collaboration with multiple disciplines at the university level will improve the integration of health disciplines and reengineer the health delivery system. In addition, the American Association of Colleges of Nurses (as cited in Wall et al., 2005) support the emphasis of an integrative approach to patient care that provides opportunities for evidence-based practices in clinical care delivery, patient outcomes, and systems management.

Other research has been published to substantiate the collaborative education model for health professionals. Rapport (2007) concluded that the ability to collaborate includes an underlying assumption that the team members have a respectful knowledge base regarding one another's disciplines, preparation, and expertise so they can effectively contribute to the efforts of the team. Along with Reeves (2009), who suggested that to be fully integrated, interprofessional intervention needs to be education-based, practice-based, and organization-based. Reeves inferred that situating interprofessional learning, working, and quality improvement can create a continuum between interprofessional learning and service improvement.

***Theme: Many respondents have confidence that physicians will rely more and more on the information from the pharmacist.*** Respondents noted that this is happening, slowly but surely. The respondents gave specific examples of situations that are organized where the professionals are equal partners such as Kaiser Permanente, Indian Health Services, and Group Health of Puget Sound in Washington State. Respondents frequently repeated during the interviews that interdisciplinary relationships between providers are developing at a faster rate in hospital settings than in the community practice.

***Theme: The changing landscape in healthcare requires a team-based approach***

***and the pharmacist was the best professional to manage the drug therapy.*** Respondents explained that the overarching belief at the time was drug therapy becoming more complex and complicated, requiring pharmacy to be more involved in the outcomes of drug therapy intervention, which was going to require a transformation in pharmacy education. This attests to the IOM (2000) report that the rapid changes occurring in the U.S. healthcare delivery system have resulted in a gap in the ability to translate the knowledge and skills of practitioners into the best-practice model. One respondent stressed that physicians know a lot about a small number of drugs that they routinely prescribe, but it is unreasonable to expect the treating physician to comprehend the complexities of thousands of drugs that are available. On the other hand, pharmacists have the capability to understand all the drugs, be informed on all the complications, and have the ability to tailor a drug treatment specifically for an individual.

Respondents noted that people, primarily in education, were highly visionary and were advocating for collaborative clinical practice as an essential in effective patient care. This approach may not have been so visionary because Worthen (2006) revealed that the final report of the Millis study, *Pharmacists for the Future*, suggested that pharmacists be trained with other health professionals, exposing the student to team-based patient care. Additionally, the 1992 ACPE curriculum standards include that students must be prepared for the “emerging roles and responsibilities that ensure the rational use of drugs in the individualized care of patients” [ACPE, 1993, standard 8].

This new information expands on Clark (1999), who noted that one of the major trends in health professions education is the evolution of interdisciplinary teams, including community-based experiential learning. Similarly, Luke et al. (2009) reported that the Institute for Interprofessional Health Sciences Education (IHSE) was founded to

promote interprofessional education across institutions, faculties, practice sites, and communities of practice. In addition, Brazeau et al. (2009a) believed that Pharm.D. education would enable pharmacists to serve in a multitude of practice settings as well as serve as a change agent in the complex healthcare system.

**Tenth pattern: Most patients need drug therapy and many physicians, nurses, and other health professionals are recognizing that there is somebody on the team who has expertise about medication therapy and not diagnosis. Understanding the complementary competencies and skill sets of each individual on the interdisciplinary team needs to occur at the educational level.** One respondent remarked that whenever a group exists, whether it is a team of health professionals or an athletic team, there has to be some structure. Furthermore, responsibilities are assigned to each individual, resulting in a collaborative effort for a collective solution to a problem. As an extension of the findings in pattern three, the pharmacist is being recognized as the expert in pro-therapy and drug management in interdisciplinary healthcare teams.

***Theme: Pharmacists lack the skills in physical assessment that are necessary for patient diagnosis but are experts on the drug management of disease.*** Several respondents addressed the contrast between educational programs that support the collaborative practice model of patient care. Pharmacy education focuses on the medicinal management of disease and disease processes, while other healthcare providers such as medical physicians and nurses are trained in the physical assessment and diagnosis of disease and disease processes. This distinction supports the need for interdisciplinary collaborative patient care. For the pharmacist to be an autonomous, primary healthcare provider, more training would be required in assessment and diagnosis, resulting in an extended educational process.



***Theme: One way to change the face of a profession is to educate health professionals together in a collaborative environment.*** The respondents described the theory that educating health professionals together develops respect between disciplines, producing change in practice over time. One respondent was mindful that this theory of interdisciplinary education has been a conversation among academic leaders in health professions for over 40 years, but the application of interdisciplinary learning on campuses has been both exhausting and slow to develop.

Most of the discussion regarding interdisciplinary education is centered on the didactic portion, disciplines being educated together in the basic sciences. One obstacle is the significant difference in the educational process for medical doctors, nurses, and pharmacists. Medical and nursing education focus primarily on diagnosis; whereas, pharmacy is more focused on the treatment of conditions, not physical assessment needed to diagnose disease. The respondents concluded that interdisciplinary training in both types of training--the didactic and clinic components--is key to producing young health professionals who understand the importance of collaborative patient care.

The respondents affiliated with institutions that are implementing interdisciplinary learning declare that the disciplines are increasingly being educated in the experiential arena, making rounds in hospitals, on clinical rotations, and on clerkships. One respondent reported that there is evidence that in the hospital setting that, if a pharmacist rounds with physicians, there are fewer drug reactions and medical errors. This information parallels the IOM (1999), who concluded that errors are not caused by the actions of one individual or a particular group, but by faulty systems, processes, and conditions that lead people to make mistakes or fail to prevent them. In the IOM (1999) report, *To Err is Human*, it is inferred that the know-how already exists to prevent many

of the mistakes, but there must be patient safety initiatives to improve the quality of team communication between the professionals and organizations. This seminal document stresses that safety demands effective communication and collaboration (Reeves, 2009).

***Theme: There are more opportunities for the disciplines to be educated together.*** Several respondents commented that an increasing number of institutions are educating students together in the experiential portion, such as clinical rotations and clerkships, resulting in improved respect between disciplines. In addition, respondents believed that if you asked a physician the dosage forms, they would refer to the pharmacist on the case. One respondent noted that in many chain drug pharmacies, nurse practitioners are working collaboratively with the pharmacist, thus building more respect and trust between the practitioners. The details of the responses correspond to Clark (1999) who believed that interdisciplinary education has important implications for the competencies of graduates of health professions programs. In light of this modern trend Nair and Webster (2010) declared that change is often difficult in fundamentally conservative professions such as health care and education.

#### **Research Question 1d**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

**d. societal and economic landscape of the health care industry (cost-benefit)?**

Respondents were candid in their perceptions of how the Pharm.D. has impacted the societal and economic landscape of the health care industry. The following patterns and succeeding themes deliver new insights into the subject.

**Eleventh pattern: The Pharm.D. has resulted in a gradual change in the practice and professionalization of pharmacy and the concomitant views of society.**

One respondent explained that, before the Commission to implement change in pharmacy education commenced, the AACP provided strong evidence that pharmacy's value to society would be greatly increased if pharmacists were capable of providing pharmaceutical care. This respondent recalls that the first step to reach this goal would be more preparation for those responsibilities through more clinical training. Eventually this led to the establishment of the six-year curriculum guidelines that included an increase in the experiential component.

***Theme: One of the underlying reasons for the transition to the Pharm.D. was that pharmacists wanted more responsibility, but there is a difference between increased responsibility and autonomy.*** Respondents acknowledged that the Pharm.D. graduate has the knowledge, skills, and abilities for providing patient-oriented pharmaceutical care in a variety of practice settings. They are experts in the field of medicinal treatments and patient management of drug therapy. As discussed in the thirteenth pattern, the Pharm.D. is limited by the lack of training in physical assessment and diagnosis. It is important that they work in a collaborative environment, respectful of their scope of practice boundary levels. This information provides quality new thinking related to the importance of collaborative care that the author did not discover in the literature.

***Theme: Pharmaceutical care services cannot be forced upon the public, but take a slow, steady change in perceptions and expectations of individual patients.*** Most respondents believed society is becoming better educated, with many consumers first talking to the pharmacist about drug-related concerns and healthcare options. On the other hand, patient literacy is a major public health issue, especially in the aging population. One respondent pointed out that many people obtain information about their

diseases or conditions from the Internet, and some of it can be confusing. The pharmacist plays an important role in the community by making personal connections with individuals. These informal networks spread throughout the population the notion that patients can go to their pharmacist for help with medications and healthcare needs. The respondents' comments support but give more detail compared to Kreling et al. (2010), who perceived the current trends, such as an aging population and increased use of prescription drugs, as indicators that society needs patient-based pharmacists in the community practice setting.

***Theme: When opportunities are present for pharmacists to practice to their fullest potential, society will benefit as a whole.*** Multiple respondents believed that, when the pharmacist is given the opportunity to communicate directly with the public, they accept the responsibilities and patients are appreciative of the service. On the other hand, the same respondents noted that these opportunities are currently not the norm in pharmacy practice and perceive this to be a disservice to society. This point of view aligns with the IOM (2001) report that bringing the best-practice model of health care to every community will require a fundamental, sweeping redesign of the U.S. healthcare system. These personal reflections bring explicit insight to the field related to the difficulties of change in a complex system.

***Theme: Opportunities to practice pharmaceutical care are still in their infancy.*** Many Respondents believed that, if community pharmacists are given the opportunity, they excel at providing clinical pharmacy services. One respondent professed that now that Pharm.D. graduates have the training to practice pharmaceutical care, the profession has the responsibility of educating the public at large the capabilities and the benefits to the individual and society as a whole. This is a process, one that has evolved over the past

20 years, but has not been immersed into mainstream healthcare. Increased expectations of the pharmacist and practice should develop through recognition accrued from greater accessibility. Yet the notion that people will ask questions and trust them has evolved much more slowly than anyone imagined. This perception endorses Morgan and Hunt (1994), who accepted that when commitment and trust are present, outcomes such as efficiency, productivity, and effectiveness flourish. In addition, Wilson (1995) suggested that when both parties invest in the relationship, there is an increase in value and stronger bonds between individuals. Moreover, Gruen et al. (2000) concluded that when in a long-term, committed relationship, customers become more involved and participate in the value of the exchange. The data provide new thoughts and explicit illustration of the importance related to communication between the pharmacist and the patient.

***Theme: The pharmacy profession, as a whole, has not been proactive in public relations. The health literacy of an individual seemed to be directly related to personal interaction with a pharmacist.*** We [Respondents speaking as a profession] need to practice speaking to the public, in lay person, terms, to help them build trust and understanding of the valuable role pharmacy can play in their healthcare decisions. Respondents agreed that a large-scale campaign to educate the public on the value of pharmacy has not been established. Efforts by the U.S. Public Health Service have promoted pharmacists and the intervention with drug therapies, but the profession needs to be its own advocate. This parallels Brazeau et al. (2009b) who recommended that pharmacy graduates must be engaged in their communities and be leaders as well as advocates. This study provides new advancements in the field related to the importance of self-advocacy of pharmacists to create situations in which pharmaceutical care can be practiced.

## Research Question 2

### **What is the transferability of an entry-level clinical doctorate related to professional opportunities?**

The respondents spoke to the issues regarding professional opportunities associated with the Pharm.D. Many opinions have been voiced in publications about the expanded professional opportunities in the pharmaceutical industry and the understanding of the degree on a global level. Compared to this literature, the patterns that were identified seem to be more narrowly focused in the respondents' reflections on the questions representing this second research question. Most of this information is new to the field because, to the author's knowledge, very few theoretical or empirical studies have been published on the transferability of the Pharm.D. related to professional opportunities both nationally and internationally.

**Twelfth pattern: The Doctor of Pharmacy is well prepared for a larger area of professional practice and related careers, such as the pharmaceutical industry and prescription development.** Most respondents believed that new opportunities have opened for pharmacists and are confident that greater opportunities still await the Pharm.D. because of the uniqueness of pharmacy education. The following themes capture these thoughts.

#### ***Theme: Opportunities are expanding in hospital and community settings.***

Respondents believed that opportunities that allow the pharmacist to communicate and interact with patients are expanding, but slowly. The hospital setting is growing more rapidly than community pharmacies. This retrospective investigation provided original data regarding the opportunity differences between hospital and community settings. The author was unable to identify any prior research on this distinction.

***Theme: Pharmacy is a huge industry and Pharm.D.s are highly sought today throughout the field.*** Respondents noted that the pharmaceutical skills associated with the Pharm.D. are becoming an integral part of biotechnology research and development, as well as other related fields. Once again, this retrospective inquiry provides new insights in the field, with no related studies found that addressed this benefit to both society and the new Pharm.D. graduates, i.e., their knowledge and skills enhanced biotechnology research while some individuals found a demand for their services outside the practice of pharmacy per se.

**Thirteenth pattern: There were external forces behind the progression of the clinical doctorate in pharmacy, and other professions that are contemplating the transition may want to address these factors.** The respondents were cognizant that the transition for other health disciplines will be a unique and individual experience, but there are commonalities in the process where the experiences are transferable. Because pharmacy has experienced many mistakes and successes related to the transition to the Pharm.D., the awareness of those in the field may assist other professions in their transition to the clinical doctorate. The explicit details provided in this reflective study yield new insights to the specifics of the errors and triumphs that pharmacy experienced in the transition to the Pharm.D., which contribute to the transition to the clinical doctorate in other fields.

Specifically, the respondents considered the change in accreditation standards, curriculum requirements, and the degree change to be positive achievements for the profession as a whole. The uncertainty of the worth of the clinical doctorate and the queries regarding potential degree creep (requiring ever more degrees for beginning professional practice) were quieted with the above-mentioned decisions. On the other

hand, the respondents addressed the inattention to the complexities of the change process and the lack of a strategic plan to advocate for the changes as errors.

***Theme: The respondents perceivedd this transition to be successful in pharmacy because all stakeholders were involved.*** Most respondents believed a major facet in the success of the Pharm.D. was commitment to include all stakeholders in the decision-making process. Taking the time to involve people, even those who were not viewed as allies, prolonged the process but it was necessary. Pharmacy leaders were dedicated to getting as many stakeholders as possible, to buy into the mandate before it was passed. The current study supports Boydeen (2006), who opined that the leaders and stakeholders were at the core of the pharmacy-degree changeover; but this retrospective inquiry provides explicit details of situations in which stakeholder involvement proved to be a vital component to the decision-making process.

***Theme: The respondents agreed that other professions might want to take time to learn this process, because this process has worked well for pharmacy.*** Many respondents believed that, if other professions read what is in the published literature about how this process worked, the tasks and steps it took to change the pharmacy practice can be used as a template for the transition. Collectively, they noted that the accomplishments in advancing the pharmacy profession, beginning with the Pharm.D., have been impressive. To the author's knowledge, these findings are the first empirical study on the topic. Available resources on the advancement of the pharmacy profession are in the form of position papers, opinions, and commentaries; but this study allows for empirical evidence that there have been advancements in pharmacy education and greater opportunities in clinical practice as a result of the Pharm.D.

***Theme: If the various stakeholders in the educational institutions successfully***



***implement change in the educational requirements, the graduates of the Pharm.D. programs will have a ripple effect through the rest of society due to their upgraded capabilities and professional practice.*** The respondents understood that in order to transform the face of a profession successfully, conquering change in educational requirements must be the first step. From there it is a slow evolution through the many stages from policy change to public acceptance. The respondents warned that any profession that assumes this will happen in two to three years will be grievously disappointed. This reinforces the IOM (2001) report that indicated changing the professional philosophy does not guarantee all stakeholders will embrace the changes. In addition, studies by Brazeau et al. (2009), Greenwood et al. (2002), and Siler and Randolph (2006) testify that the changing the degree required to enter into a profession is accompanied by fundamental barriers or concerns that underlie an organizational change process. This retrospective study provides explicit insight demonstrating that pharmacy did change the professional philosophy, yet not all stakeholders have accepted these changes. In addition, this study provides details of the obstacles and issues that pharmacy experienced with the change to the Pharm.D.

***Theme: It is important for a profession to articulate clearly what the difference will be when the professional doctorate program is implemented and how that will translate to better outcomes for patients.*** Respondents urged any profession that is considering changes in required credentials to document how the outcomes will benefit the patient. Several respondents pointed to nursing as a profession that needs to address possible overlap of credentials related to the multiple layers of nursing certifications as they move toward the DNP. This supports Griffiths and Padilla (2006), who provided linkage to the influences between the decision to move to the clinical doctorate in

occupational therapy and other fields such as pharmacy, nursing, and physical therapy. Yet, the current study differs, in that specific issues are reported in more detail, especially with respect to the conflicts and resistance from various stakeholders, e.g., changes in accreditation standards, curriculum redesign, and interdisciplinary opportunities that pharmacy confronted during the transition.

***Theme: The intention of the profession to transition to the practicing doctorate should be to establish a role as part of a collaborative team with other healthcare professionals, not increase the professional autonomy.*** The respondents suggested those professions considering changes in required credentials need to be transparent, mindful, and reflective regarding the intention for the changes. This new information confirms Rapport et al. (2007), who noted that external forces behind the progression of the clinical doctorate pertain to all disciplines undergoing the same transformation. In addition, Threlkeld et al. (1999) argued that discussing trends occurring in other fields that have resulted in the transition to the clinical doctorate, valuable knowledge and guidance can guide leaders of other health care disciplines involved in this organizational change. This study provides new empirical information on the transition to the Pharm.D. focused on understanding the micro trends and issues relating to implementation associated with the progression to the clinical doctorate in health professions.

**Fourteenth pattern: The biggest surprise from the establishment of the Pharm.D. as the sole entry-level degree has been the unexpected rise in pharmacy schools.** Several respondents acknowledged that the expansion of pharmacy schools was an unexpected outcome of the Pharm.D. The growth in pharmacy schools over the past 20 years opposed all predications that were forecast at the time regarding the changes being contemplated. Knapp (2012) argued that there was pressure to expand pharmacy

school enrollment at the existing schools to alleviate the pharmacist shortage. But some institutions focused on increasing the number of Pharm.D. programs and schools to address the shortage in the workforce. Together, the increasing enrollment at existing schools and the expansion of new programs and schools led to a situation in which the number of new graduates was growing at a faster rate than the workforce needs. This study expands the understanding that this was not an anticipated outcome and one that has caused concern within the profession.

***Theme: During the transition period, leaders thought that this educational change would decrease the number of applicants. This turned out not to be true.*** Many schools of pharmacy thought the expansion to a six-year program would not be attractive to potential students and were discussing alternatives. At the time, however, there was a shortage of pharmacists in the workforce, which was appealing to prospective students. These demands from the marketplace resulted in an increase in applicants and a growth in new schools. This reflective investigation has provided new insight to previous researchers, such as Brown et al. (2003) and Tennant (2004), who documented the increase in doctoral programs in the past decade and acknowledge that new graduates expect high levels of knowledge, skills, and abilities when they obtain the qualifications to graduate. This study contributes explicit insight related to how the increase in Pharm.D. applicants has had an inverse relationship with the workforce demands in pharmacy, a point that might be a concern for other disciplines transitioning to the clinical doctorate.

***Theme: In addition to the increased number of schools, the class size has grown as well.*** Greater number of schools and larger class size equates to more Pharm.D.s entering the workforce. Some respondents acknowledged that, at one time, there was a

shortage of pharmacists but questioned whether the saturation point regarding the number of pharmacy schools and the number of graduates who will be entering the marketplace has now been reached. In contrast, the Pew Commission (1995), now known to have been not only off the mark but to have erred in the wrong direction, warned of a potential surplus of pharmacists and recommended a cutback in pharmacy schools.

More recently, Knapp (2012) suggested that the pharmacy education community rejected the Pew Commission's report, with seven new schools founded between 1995 and 2000. Within 15 years of the Pew Commission's report, 44 additional pharmacy schools had been founded. In addition, DiPiro (2003) proposed that the expansion of pharmaceutical education underscored issues about quality in pharmacy education. Knapp noted that the attention was on increasing the capacity of existing schools, resulting in a sizable increase in enrollment. In contrast to all of these reports, what the current study contributes is retrospective insight as opposed to studies that are policy-focused and based on secondary data on numbers of students and schools related to the projections on the need for pharmacists in the future. This study is micro, focused on personal experiences of individuals, whereas the other work contains little if any insight about how this played out at the level of lived experience, one institution at a time.

***Theme: There was the perception of uncertainty regarding the quality of some of the new schools and new programs within existing schools that have been started in the past 20 years.*** The respondents suggested that some of the new schools are focused solely on producing new graduates and disregarding research. They have stacked the faculty positions with clinicians, not hiring trained researchers. Although the ACPE accreditation standards do not specify scholarship requirements, some respondents argued that the lack of ongoing research may be a disservice to the profession. This is consistent

with Campbell (2008), who reported that successful programs were committed to the foundation of professional practice with a balanced emphasis on research and teaching.

One respondent suggested that schools established before the Pharm.D. have been successful in hiring clinical faculty and developing the experiential component without compromising the research and basic science component of education. This contrasts with Campbell (2008), who opined that a pharmacy school that lacks a strong basic science curriculum becomes segregated philosophically and geographically from the pharmaceutical basis of pharmacy and from other health professions. Further, those schools that lack the resources to create a robust clinical component cannot assemble a quality program in pharmacy education.

The respondents were concerned, but cautious, in their critique that many newer Pharm.D. programs are established in schools that do not have an understanding of graduate education or health professions education. Many respondents believed the culture of an institution is important to the success of the degree programs offered. Yet, respondents acknowledged that it is difficult to measure the quality of the programs, primarily because of the difficulties in measuring the quality of the amorphous outcomes that constitute education in its broader meanings.

Despite all the problems in assessing quality in educational programs, accrediting agencies and professional associations have developed standards by which to assess efforts to produce the best professionals. DiPiro (2008) concluded that quality relates to the adequacy of resources, professionalization of students, faculty scholarship, and achievement of competencies and outcome measures that are valued in that field. Collectively, these standards ensure that graduates are capable of meeting the current and future needs for patient-oriented healthcare. While DiPiro and Campbell (2008) spoke

broadly about quality, standards, and the changes inherent in the accreditation process (preparation, including curricular revision and updates; the visit, including feedback and further revisions; and final approval, including preparations for the next cycle), the current study reflects the role that the culture of an institution plays with respect to understanding of graduate education and consideration of quality and success at the micro level.

***Theme: The largest increase of new programs has been in private schools, many without the established culture of doctoral or health professions education.*** Some respondents believed that, because a perception of a shortage of pharmacists still exists, schools see an opportunity for increased revenue. This raises the question, What is the intention of the institution to develop a Pharm.D. program? The author is unaware of empirical data that supports this idea, but one respondent shared his opinions based on extensive experience assisting schools contemplating a pharmacy program. This individual concluded that many of the schools, particularly those that have no existing health professions or graduate programs, seek to improve their institutional image by developing a doctoral program. They think that if they start with the Pharm.D. program, the enhanced prestige will trickle down to new undergraduate programs in health sciences. This respondent noted that the accreditation agencies are beginning to address this issue, which is a new trend in the field. The speculation of this respondent suggests the need for more systematic investigations on the motivations for starting new programs in the health care professions and the adequacy with which accreditation agencies have monitored these new programs both in the past and looking forward.

**Fifteenth pattern: The conversation about redefining the pharmacy profession is happening on a global scale.** Respondents raised a number of issues that

focused on the scope of pharmacy internationally. International communication and collaboration has been transformed by the invention of the Internet, resulting in drug information being shared across borders at the click of the button. Concerns about equality of professional credentials are surfacing on a global level. The legal definition of pharmacy or professional practice may never be uniform, but efforts to understand the definitions as they relate to individual cultures should continue. This new knowledge expands on Neumann (2005), who noted that the professional doctorate has structural and conceptual differences that vary from country to country. In addition, Jolley (2007) acknowledged that, as the professional doctorate is becoming more popular, much of the confusion can be attributed to the differences in nomenclature between countries.

***Theme: Understanding the culture of a country and how that shapes the response to a major change effort is vital to professional change.*** Respondents raised issues relating to the training and education of pharmacists from one country to the next, emphasizing the dependence on the culture and change processes. Accessibility to drugs and information across international borders makes it vital to understand how local context affects what happens in other countries in order to have open dialogue and communication. This perception expands on Brown and Lauder (2001), who asserted that the national prosperity in a competitive global market is dependent on the advancement of knowledge and skills of the workforce. Additionally, Brown et al. (2003) proposed that a knowledge-driven society has influenced the rise of mass higher education, especially for the terminal degree. This micro, focused investigation advances the understanding that global exchange of information is expanding at a rapid rate, but how the information is utilized within the context of a particular society requires in depth consideration of the culture of one country compared to another.

***Theme: On a global scale, the Pharm.D. is not equivalent around the world.***

***The ACPE has opened several international initiatives and dialogue opportunities.*** As

respondents spoke about these international trends, they noted that the ACPE has begun to explore how other countries train pharmacists, specifically regarding what pharmaceutical care training would resemble within the standards of that particular culture. One respondent explained that there is an effort to harmonize the way pharmacy and pharmacy education is experienced across the Eurozone. This is under the jurisdiction of the World Health Organization (WHO) whose leadership is dominated by Swiss medical practitioners. While WHO is addressing the changing role of the pharmacist, Switzerland pharmacists have only recently achieved recognition so the awareness by the WHO leadership is in the early stages. These new insights expand on a problem that Hunt (2009) addressed that countries for which the educational accreditation is primarily controlled by the government, accountability standards are robust but institutional autonomy is limited. This compares to countries such as the United States, where the accreditation system allows for greater institutional autonomy but accountability to societal stakeholders is weak. Furthermore, Engel (2000) was mindful that there are countries with an increasing number of professionals with an earned doctorate who are either underemployed or unemployed, during a time when the cost of education continues to escalate. The work in the current study differs from the extant literature by focusing on advancements of pharmacy on a global level and represents the commonality of concerns internationally. This information will help advance the work of professional leaders as they work toward unification of pharmacy worldwide.

### **Additional Findings**

The respondents raised a number of issues that augmented the author's attempt to



obtain insight related to the research questions. The following patterns and subsequent themes are important perspectives that provide contemporary revelations related to the Pharm.D.

**Sixteenth pattern: The Pharm.D. must rely on the pharmacy technician in the dispensing role in order to have time for patient care.** Respondents recognized explicitly that for pharmaceutical care to become the primary task of the Pharm.D., pharmacists will have to relinquish dispensing duties (allocation of medicines) to the pharmacy technicians. Respondents raised issues related to employment, salary, role, responsibilities, and the business model. Underlying all this was the question: When? This was not addressed in the research questions; accordingly, the author's search of previous literature that pertains to the capacity in which pharmacy technicians impacted the Pharm.D. is less exhaustive. Noteworthy, the issues raised are rife with resistance to change, and further research on this is clearly warranted.

***Theme: The role of the pharmacy technician has created huge internal conflict for many years, and this continues to this day.*** According to several respondents, the debate surrounding the role and responsibilities of pharmacy technicians is as long standing as the Pharm.D. discussion. The reflections of these respondents constitute information new to the field, as the author is unaware of published literature that addresses the conversations and decision-making process of the pharmacy technician's scope of practice.

***Theme: The profession needs to get technicians licensed, but the idea of accomplishing this in this country will require a daunting political battle.*** The respondents indicated that, although opportunities for pharmaceutical care are expanding, the majority of Pharm.D.s are in a community practice dominated by the chain drugstore

business model. The debate is an extension of previous discussion segments in this dissertation. The licensing of pharmacy technicians is a potential threat to the pharmacist in this situation. The scope of practice of pharmacy technicians is inconsistent throughout the United States, mimicking the issues of the Pharm.D. Despite the complexities, and ultimately the importance of this issue, the author is unaware of published literature that addresses the debate regarding the regulation and scope of practice of the pharmacy technician.

**Seventeenth pattern: Location, age, and patient compliance affect access to and quality of healthcare.** The following themes relate to the respondents' perceptions related to with access to quality health care, especially for high-risk populations.

*Theme: One of the surprises has been the rather quick movement of pharmacists out of the inner cities.* Respondents spoke generally regarding the expectation in the caring professions that the practitioner is there to serve the best interests of the patients. Education in most health professions has a service duty requirement. The respondents noted a limited presence of pharmacists in underprivileged areas, specifically the inner cities. One respondent believed this is a result of two things: (a) the pharmacy education curriculum has dismissed the civic duty requirement, and (b) new graduates are attracted to practice situations that provide the highest salary. In other health professions, there is an agreement with the federal government that provides a tuition waiver for graduates who practice in underserved regions within the U.S. This option is not available to the Pharm.D. at the time of this writing. To the author's knowledge, this study is the only one that explicitly addresses the changes in the demographics of pharmacy practice. The concomitant issue regarding the omission of the service duty/tuition waiver in pharmacy education has received far too little attention in

the literature. For that reason alone, the current study makes an important contribution to the field.

***Theme: One out of every five Medicare patients ends up in the hospital because they do not take their medications correctly.*** The respondents spoke passionately about issues related to health literacy because of a deficiency in access to quality care, especially for the at-risk populations. Several respondents believed pharmacists have a responsibility to address the accessibility problems but acknowledged that this is a major challenge because of no compensation system established for health literacy services for pharmacists. These comments provide a present day perception of a discussion described by Worthen (2006) that started in 1967 when the Task Force on Prescription Drugs were charged with investigating the impact of extending outpatient prescription coverage to Medicare patients. Again, the literature on this topic is sparse, and raising this issue explicitly is an important contribution to the field.

### **Recommendations**

While it is commonplace for the **Recommendations** section of a dissertation to be divided into two sections--one on policy and one on future research--this study includes a third section, **Suggestions for Other Health Professions**. Throughout the findings from this study, the participants provided strategies specific to other health professions that are considering the educational requirement change to a clinical doctorate. The general responses to the interview questions were covered with a sense of “we have been there, and we would like to assist any other health profession considering the clinical doctorate so it will be a successful transition.”

### **Policy Considerations**

First, the U.S. licensing regulations rest in the hands of each individual state.

There is great diversity in the scope of pharmacy practice across the country.

Technological advances allow for information transfer to cross borders in the blink of an eye. This raises concern at both the product level and the patient level of pharmaceutical care. The conversation of a national, uniform scope of practice and licensing process would support pharmacy's clarity of its internal vision.

Second, the accreditation process as it exists has evolved from an independent self-regulated entity to a complex system with relationships and interdependencies among government and institutions. Currently, the accreditation process does not have regulation over the number of schools or number of students enrolled in a program.

Yet, the educational system could take some responsibility for balancing the workforce supply/demand with the appropriate number of highly qualified practitioners.

Third, Clement (2005) suggested that one measure of quality improvement in health professional programs is increasing numbers of doctoral prepared faculty. Clement linked the trend for the increase in doctoral prepared faculty to the accreditation requirements of the doctoral degree. Yet, this does not necessarily equate to the development of critical thinking and reflective skills that Barnett (as cited in Davis & Burnard, 1992) noted that were once thought to be cultivated only through experience and professional practice. Documentation shows many health professions are deficient in clinical faculty who are capable of educating the next generation of health practitioners in experiential practice. Is it plausible to think that educators can move an individual through the newly established clinical doctorate program and assume that, without pharmaceutical practice in field, they are qualified to teach the next generation sufficiently in clinical practice? Should the accreditation agencies require a minimum of clinical experience before a clinician is qualified to take on the role of clinical faculty in

the experiential portion of the educational process? How does the pharmacy profession bridge the gap between the necessary number of faculty and the actually qualified faculty responsible for experiential education?

Fourth, conflict exists at the institutional level related to the responsibilities and career advancement for clinical faculty as compared to the responsibility and tenure track of Ph.D. faculty. The establishment of parallel guidelines that put these two important faculty appointments on the same playing field would bring cohesiveness between the departments, strengthening the program outcomes. At the very least, the guidelines for tenure and promotion for clinical track faculty need to be revisited to ensure they are consistent with responsibilities and skill sets, the changing nature of professional practice, and the need for competent instructors in the clinical arena. Given this latter point, questions about whether faculty with clinical appointments should be allowed to chair doctoral committees deserve serious consideration.

Fifth, third party payer systems are apprehensive of paying higher levels of reimbursement. To date, few reimbursement sources have altered payments to reflect advanced degrees held by health professionals (ASAHP, 2012). It is unlikely that payers will reward the pharmacist financially unless the Pharm.D. results in a reimbursement skill that the individual (or profession) did not have previously. The current reimbursement model is product-oriented and directly related to dispensing. Perhaps a pharmacy-wide, national initiative parallel to the set of four agencies that worked together to mandate the transition to the Pharm.D. back in 1992 could be convened to discuss/implement a strategy for the transition from product-oriented to patient-oriented pharmaceutical care.

## **Suggestions for Other Health Professions**

First, clarity and transparency of the intention to change the educational requirements are important. Be specific on how the new requirements will advance the knowledge, skills, and abilities of the practitioner. Explain how the advance in capabilities benefits the patient, healthcare delivery, and society as a whole.

Second, involve all stakeholders in the discussions at every step along the way. Take the time to gain confidence that the change in educational requirements is necessary.

Third, the healthcare system is moving to collaborative practice, not increasing the autonomy of individual specialist. The clinical doctorate allows the practitioner a position on the patient-care team to work together with other disciplines for the best practice for the patient. Aspects of this collaboration include both education (e.g., clinical rounds as a multi-disciplinary team) and practice (professionals from different healthcare professions consult to share complementary knowledge/skills for improved patient care).

Fourth, understand the necessity of advocacy. Changing only the educational requirements does not result in immediate changes in practice. Establish a strategic plan to educate the stakeholders, other health professionals, regulators, and the public.

Fifth, prepare for the inevitability of resistance to change, both internally and externally. Thus the need is present to address strategies for overcoming the recalcitrance, including the possibility of restructuring incentive systems.

Sixth, consider the impact of curricular changes on students and the entire educational experience.

Seventh, investigate the role finances play in changing the educational requirements, such as the increase in educational cost to the student, institutional

expenses to obtain the necessary resources, and the state of the reimbursement system for the practitioner in the field.

Eighth, be prepared for a long, slow process. This type of major change effort is an evolution, not a revolution.

### **Future Research**

First, a fundamental question before the profession is, What should the pharmacy profession be doing to take care of patients at every single practice setting? One respondent said that he tried to get students to write a paper that describes the professional role, set of functions, practice activities, and job descriptions of what they visualize themselves doing in practice before they graduate. An evidence-based articulation of what practice should be and how to get there successfully would constitute a powerful research agenda.

Second, Clark (1999) suggested that many educational programs use the term *interdisciplinary* when they mean *multidisciplinary*. Some experiential learning situations have multiple contributions from different departments or disciplines, but they fall short of the level of integration of perspectives demanded by the interdisciplinary context. A respondent criticized the experiential piece of pharmacy education, noting that it is a disservice to send students to chain drugstores while in college and call that a community pharmacy rotation, which is supposed to constitute a clinical experience and expose the student to counseling patients. Reeves (2009) proposed that academic leaders have a poor idea of what form of faculty support is necessary to prepare students for facilitating interprofessional learning. Thus, research is needed to explore the structure, goals, and functioning of the experiential portion of pharmacy education.

Third, a theme discovered from the responses was that the primary external

opposition was from the chain drugstores and owners of regional chains. The NACDS was a strong lobbyist against the move to the Pharm.D. In the past few years, many chain drugstores are shifting the business model of the pharmacy departments. One respondent suggested that it might be interesting to investigate the factors influencing chain drugstores to change the store layout so that pharmacists are actually talking to patients.

Fourth, the role and responsibilities of technicians in pharmacy continue to build. Knapp (2012) noted decisions over the appropriate training, credentialing, and the scope of practice of technicians are still unsolved. These issues are ripe for systematic research.

Fifth, accreditation is a self-regulated process driven by the adherence to quality of the individual institution, not from the perspective of the overall quality of pharmacy education (Knapp, 2011). The general position of the accrediting agencies is that all Pharm.D. schools meeting the minimum requirements for accreditation are basically the same, regardless of inclusion or exclusion of research requirements. Knapp (2012) argued that the ACPE has been criticized for allowing these schools to start up too easily. There is expressed concern about the increasing number and types of Pharm.D. schools and implications for the quality of these programs, vis-à-vis pharmacy education enterprise and patient care. A major investigation on the components that relate to quality professional education, akin to the Flexner Report of 1910, is warranted (Thelin, 2004).

Sixth, institutional issues related to differences in prestige and the hierarchy among faculty can have consequences for the educational program and practice. The effects of this phenomenon for achieving tenure/promotion for different salaries, and even the structure of appointments within the tenure stream (e.g., membership in graduate faculty) is suitable for valuable empirical research.

Seventh, as other fields transition to the clinical doctorate, systematic research on



the development and implementation of the new degree for entry-level practice should occur *throughout the process*. The pharmacy profession failed to do this. The possibility of discovery that some policies have generated negative, unintended consequences and concomitant corrective action is too important to leave unmonitored.

Based on the potential implications for further research, conceptualizing the transition to the Pharm.D. based on empirical work may contribute to understanding the scope of pharmacy practice in emerging contexts, redefining the position of the pharmacist in the healthcare system, and advancing theories relevant to a wider range of individual.

### **Conclusions**

A common trend that is occurring in health professions education is the many disciplines that are elevating the entry-level degree into practice to the doctoral level. Possibly even more prominent is the performance gap related to the competencies associated with the new degree and the opportunities to maximize the capabilities in practice. While there are significant resources on this trend in the form of position papers, literature reviews, opinions, and commentaries regarding the benefits, risks, and alternatives to the change in educational requirements, empirical research in the field is lacking.

The purpose of this retrospective qualitative study was to understand the perceptions of professional leaders and policy makers regarding the benefits, risks, and alternatives of the clinical doctorate as an entry-level degree for pharmacists. The subjects interviewed were all participants in the four key policy groups involved in the decision to mandate the Pharm.D. as the entry-level degree for the profession of pharmacy.

The 1992 mandate specified the implementation was to be completed for graduates after January 1, 2003. This provided institutions 7-10 years to execute the requirements of the mandate. In addition, the timeframe allowed leaders and professional organizations to advocate the benefits of the Pharm.D. to other health care providers and the general public. Therefore, the central research question for this study is: “What are the current perceptions (benefits, risks, and alternatives) of key policy makers in the pharmacy profession who participated in the decision to require the clinical doctorate (Pharm.D.) as the entry-level degree for practitioners?”

Study results demonstrate that the implementation of the Pharm.D. required major changes to occur at four levels: health professions education, delivery of services, interdisciplinary relationships, and society as a whole. Decisions at each level acted as a building block for decisions at the next level. Decisions did not occur in a linear fashion, but rather they overlapped one another. Each level requires constant reflection and on-going improvements, but the profession is moving forward and the Pharm.D. mandate was the starting block in these sweeping changes.

This study reveals that many pharmacy leaders believe that the Pharm.D. is the most important decision that has ever been made for the advancement of pharmacy, and the most difficult. The profession prepared for *pharmaceutical care* through the guidelines set forth by the Commission to Implement Change in Pharmacy Education. One of the greatest benefits uncovered in the data analysis was the development of a competency-based framework for the Pharm.D. curriculum: the combination of knowledge, dispositions, and clinical skills required for pharmacists as individuals, with the recognition that this clinical doctorate also may change the very nature of public sector pharmaceutical care.

The data exposing the challenges to the academy when establishing a curriculum that ensures this transformational understanding of pharmacy were monumental. Yet, the collective sense of the respondents in this study suggests that the academics have overcome them and succeeded. While the landscape of pharmacy practice continues to evolve, with the inevitability of new issues, the Pharm.D. envisioned in the 1992 mandate has clearly changed the face of the profession.

A major benefit is that the new Pharm.D. graduate has the capabilities to create opportunities in the healthcare delivery system, especially in the hospital setting. Risks associated with the entry-level Pharm.D. consist of increasing educational costs, increasing consumer costs, underuse of the pharmacist's preparation, a reduction in quality of Pharm.D. programs, inadequate faculty to train Pharm.D. students, and a shortage of Ph.D. prepared pharmaceutical researchers. In the current business framework (dominated by the large chain drugstores), the relative return to the student is problematic: the product-oriented model (dispensation of medicines) does not reflect the capabilities of Pharm.D.s to practice pharmaceutical patient care. Without a fundamental shift in the business model (from product to patient care), it is likely that salaries will become commensurate with the educational preparation.

A serious barrier to the advancement of pharmaceutical care identified in this study is that the third-party reimbursement model for community pharmacist has always been, and still is, primarily product-based. As pharmacists move from product-focused services to patient-care services, establishment of reimbursement rates for services rendered must be a priority. A base rate for the personal time required for providing direct patient care is complicated, but necessary, if the role of a patient-based pharmacist is to become the best practice of pharmacists in all practice settings. If pharmacists are

not paid for the cognitive services they are capable of providing, many will be apprehensive about assuming primary roles in a patient's care.

In order for education to be effective, it must result in the effective translation into practice of the knowledge, skills, and abilities learned. While this study is limited with respect to the broader (macro) forces of changes in education and scope of practice, this work provides some practical implications for other disciplines, particularly for how the practice has changed at the institutional (middle range) and professional (micro) levels. For those in other health professions contemplating the clinical doctorate, pharmacy already has debated, discussed, and struggled with the transition to an entry-level clinical doctorate. The Pharm.D. has now been solidified, yet the profession must acknowledge that the hoped for impact on the larger U.S. healthcare system and patients depends on the clarity of pharmacy's internal vision. For all the participants, including insurers and payers, regulators, and other health professions, the progress thus far has been significant but far from universal and fraught with resistance. The envisioned shift to a patient-based pharmaceutical care model is still a goal to be realized. Yet, given the explosion of pharmaceutical research and utilization, and an aging population, the need for advanced preparation and integration of patient care by the healthcare team is inevitable; and the quest for a patient care model, in lieu of a product focus on the dispensation of medicines, will almost certainly continue.

Among the interdisciplinary professions, the pharmacists possess the expertise to provide drug management and intervention. Patients, clinics, hospitals, and insurers are quietly pleading for competent pharmaceutical care practitioners. Opportunities would rise if these and other stakeholders understood the profession. It is essential that the recognition of each profession's unique skills and competencies and mutual respect

among related disciplines be instilled at the educational level. This requires situations where students in health professions program work together, as equals, in real-life patient-care environment.

With respect to pharmaceutical care becoming the best-practice model, the pharmacist must assume a more proactive role and increased responsibility in patient care outcomes. Pharmacy needs to possess the confidence to advocate for its own purpose and provide assurance of its own internal clarity and value to society. In addition, the pharmacist must develop open, professional relationships with patients and other members of the healthcare team.

Finally, this study asked a central question related to the current perceptions (benefits, risks, and alternatives) of key policy makers in the pharmacy profession who participated in the decision to require (by January 1, 2003) the clinical doctorate (Pharm.D.) as the entry-level degree for practitioners. The overarching conclusion is that these leaders are confident that establishing the Pharm.D. as the sole degree for entry into pharmacy practice was the right decision for the profession. In light of the changing landscape of the healthcare demands of the public and the advancement of the pharmaceutical industry, a societal need exists for advancement in the competencies of the pharmacist to practice in the 21st century. Most were proud and honored to have been part of this evolution in pharmacy practice. These key policy makers acknowledged that the transition to the Pharm.D. was long and charged with debate, emotion, and discourse, both hoping for few unexpected/problematic outcomes. This study allowed these individuals to reflect on the process.

That these key policy makers are unquestionably satisfied that the systematic and inclusive approach taken was the right one is incontrovertible. Across all the interviews,

this retrospective sense of the correctness of their decision, highly controversial and embroiled in resistance as it was at the time, comes across clearly and not without a sense of professional pride in having participated in such a momentous policy mandate. Thus, the leaders are triumphant that success in changing the professional philosophy from product-based to the patient-based *pharmaceutical care* was accomplished. The respondents were content that the academic leaders have created an educational curriculum that provides new graduates the capabilities of practicing in a variety of practice settings.

However, these leaders accept the fact that the changing the Pharm.D. was only the starting block and more is needed. Now that the pharmacists are capable of providing direct patient care and being an important member of the healthcare team, the focus now turns to establishing their solid place in the collaborative health delivery system. This requires advocacy from the professional associations, policy makers, and practicing pharmacists on the value of pharmacy to other health providers, the public, and, most important the reimbursement system. The perception of pharmacists by other healthcare providers will be remodeled by advancement in interdisciplinary learning at the educational level and collaborative care at the practice level.

As important as interdisciplinary education and collaboration by teams of professionals with complementary skills are, the current study raises another issue that may be even more problematic with respect to pharmacy's progress toward a patient care model. Respondents discussed the current business model of the large chain drugstores, by far the most common means by which the public obtains pharmaceutical products in the U.S. These retrospective interviews with the key policy decision makers for the original mandate of the Pharm.D. back in 1992 clearly demonstrate their concern that, as

long as the chains continue their practice of dispensing medicines *as a product*, progress toward the pharmaceutical care model will be both slow and limited.

That point demonstrates the power of the current study. The retrospective micro focus on the development and implementation of the decision to transform pharmacy education to the entry-level clinical doctorate, from the perceptions of key decision makers, brings to light numerous factors on one issue after another that the predominant literature of policy and position papers, political commentary and opinion, or focus on the accrediting process had simply not addressed. The reality is that, while the larger macro policies set broad parameters for scope and practice, there is much latitude at the micro level--and this often plays out one pharmacy school at a time. This study reveals these very real differences and their impact.

Those insights notwithstanding, the public's knowledge and acceptance of the value of pharmaceutical care will be established only through development of health literacy programs and improved access to high quality healthcare, especially in the at-risk population. The most important challenge remains: changing the current U.S. healthcare reimbursement model for pharmacists, from product-based medicinal distribution to pharmaceutical patient care. Until there are systemic changes related to compensation for cognitive and direct-patient services, the full benefits of the Pharm.D. will be restricted and the true potential of the transition to the clinical Pharm.D. unrealized.

## REFERENCES

- Allen, C., Smyth, E., & Wahlstrom, M. (2002). Responding to the field and the academy: Ontario's evolving Ph.D.. *Higher Education Research and Development*, 21, 203-214.
- American Association of Colleges of Pharmacy. (2012). *About AACP*. Retrieved from <http://www.aacp.org/about/Pages/default.aspx>
- American College of Clinical Pharmacy. (2000). White paper: A vision of Pharmacy's future roles, responsibilities, and manpower needs in the United States. *Pharmacotherapy*, 20, 991-1020.
- American College of Clinical Pharmacy. (2012). *Mission and strategy*. Retrieved from <http://www.accp.com/about/mission.aspx>
- American Council on Education. (2008, August). *ACE analysis of Higher Education Act Reauthorization*. Retrieved from <http://cra20.humansci.msstate.edu/ACE%20Analysis%20of%20Higher%20Education%20Act%20Reauthorization%20-%20Campus%20Safety,%20Timely%20Warning,%20and%20Fire%20Safety%20Issues.pdf>
- American Council on Pharmaceutical Education (ACPE). (1993). *Proposed revision of accreditation standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree*. Chicago, IL: American Council on Pharmaceutical Education.



- American Council on Pharmaceutical Education (ACPE). (2012). *About ACPE*. Retrieved from <https://www.acpe-accredit.org/about/default.asp>
- American Medical Association (AMA). (2012). *Careers in health care*. Retrieved from [www.ama-assn.org/ama/pub/education-careers/careers-health-care.page](http://www.ama-assn.org/ama/pub/education-careers/careers-health-care.page)
- American Society of Health-Systems Pharmacists (ASHP). (1996). *ASHP guidelines on a standardized method for pharmaceutical care. Medicine therapy and patient care: organization and delivery of services-guidelines* (258-260). Retrieved from <http://www.ashp.org/DocLibrary/BestPractices/OrgGdlStndMethod.asp>
- Association of Schools of Allied Health Professions (ASAHP). (2012). *Allied health professionals*. Retrieved from [www.asahp.org/definition.htm](http://www.asahp.org/definition.htm)
- Bardo, J. (2009). The impact of the changing climate for accreditation on the individual college or university: Five trends and their implications. *New Directions for Higher Education*, 47-58. Doi:10.1002/he.334
- Benoit, J., Mohr, T., & Shabb, C. (2004). Entry-level doctoral degrees: Issues facing graduate schools. *Journal for Higher Education Strategists*, 2, 39-56.
- Berelson, B. (1960). *Graduate education in the United States*. New York, NY: McGraw-Hill.
- Bernasconi, A. (2004). Current trends in the accreditation of K-12 schools: Cases in the United States, Australia, and Canada. *The Journal of Education*, 185, 73-82.
- Bhattacharya, C. B. (1998). When customers are members: Customer retentions in paid membership contexts. *Journal of the Academy of Marketing Science*, 26, 31-44.
- Bollag, B. (2007, June 22). Credential creep. *Chronicle of Higher Education*, 53, A10-A12.
- Bourner, T., Bowden, R., & Laing, S. (2001) Professional doctorates in England. *Studies*

*in Higher Education*, 26, 65-83. doi:10.1080/03075070020030724

Boyden, K. (2006). *Generation RX: A study of the changeover to the entry-level*

*Pharm.D. degree in pharmacy education* (Doctoral dissertation). Retrieved from ProQuest. (AAI3210006)

Bradshaw, P., Murray, V., & Wolpin, J. (1992). Do nonprofit boards make a difference?

An exploration of the relationships among board structure, process and effectiveness. *Nonprofit and Voluntary Sector Quarterly*, 21, 227-249.

Brazeau, G., Meyer, S., Belsey, M., Bednarczyk, E., Bilic, S., Bullock, J., DeLander,

G.,... Traynor, A. (2009a, March). *Future pharmacy graduates—Making more opportunities than we see*. White paper prepared for the American Association of Colleges of Pharmacy (AACP), Curricular Change Summit, Scottsdale, AZ.

Brazeau, G., Meyer, S., Belsey, M., Bednarczyk, E., Bilic, S., Bullock, J., DeLander,

G.,... Traynor, A. (2009b). Preparing pharmacy graduates for traditional and emerging career opportunities. *American Journal of Pharmaceutical Education*, 73. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/issues/185253/>

Brittingham, B. (2008). An uneasy partnership: Accreditation and the federal government. *Change: The Magazine of Higher Learning*, 40, 32-38.

doi:10.3200/CHNG.40.5.32-39

Brittingham, B. (2009). Accreditation in the United States: How did we get to where we

are? *New Directions for Higher Education*, 145, 79-86. doi:10.1002/he.331

Brown, P., Hesketh, A., & Williams, S. (2003). Employability in a knowledge-driven

economy. *Journal of Education and Work*, 16, 107-123.

Brown, P., & Lauder, H. (2001). *Capitalism and social progress: The future of society in*

*a global economy*. Basingstoke, England: Palgrave Macmillan.

- Brown, W., & Iverson, J. (2004). Exploring strategy and board structure in nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, 33, 377-400. doi: 10.1177/0899764004265428
- Buerki, R. (1999). *In search of excellence: The first century of the American Association of Colleges of Pharmacy*. Alexandria, VA: American Association of Colleges of Pharmacy.
- Burns, N., & Grove, S. K. (2005). *The practice of nursing research: Conduct, critique, and utilization* (5th ed.). St. Louis, MO: Elsevier.
- Cartwright, C., & Reed, C. (2005). Policy and planning perspectives for the doctorate in nursing practice: An educational perspective. *Online Journal of Issues in Nursing*, 10, 125-135. Retrieved from [www.nursingworld.org/OJIN](http://www.nursingworld.org/OJIN)
- Carver, J. (2006). *Boards that make a difference: A new design for leadership in non-profit and public organizations* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Clark, P. (1999). Service-learning education in community-academic partnerships: Implications for interdisciplinary geriatric training in the health professions. *Educational Geriatrics*, 25, 641-660.
- Clement, D. (2005). Impact of the clinical doctorate from an allied health perspective. *AANA Journal*, 73, 24-28. Retrieved from [www.aana.com/members/journal/](http://www.aana.com/members/journal/)
- Collier, S. (2008). Changes in the health workforce: Trends, issues, and credentialing. In D. E. Holmes (Ed.), *From education to regulation: Dynamic challenges for the health workforce* (pp. 1-21). Washington, DC: Association of Academic Health Centers.
- Cohen, J. (2008). Pharmacy education in the United States: What lies ahead? *Journal of Medical Science*, 28, 103-110.

Commission to Implement Change in Pharmaceutical Education. (1997a). *Position paper*

*#1: What is the mission of pharmaceutical education.* Retrieved from

<http://www.aacp.org/resources/historicaldocuments/Documents/BackgroundPaper1.pdf>

Commission to Implement Change in Pharmaceutical Education. (1997b). *Position paper*

*#2: ENTRY-LEVEL, curricular outcomes, curricular content, and educational process.*

Retrieved from

<http://www.aacp.org/resources/historicaldocuments/Documents/BackgroundPaper2.pdf>

Commission to Implement Change in Pharmaceutical Education. (1997c). *Position paper*

*#3: Entry-level education in pharmacy: A commitment to change.* Retrieved from

<http://www.aacp.org/resources/historicaldocuments/Documents/BackgroundPaper3.pdf>

Commission to Implement Change in Pharmaceutical Education. (1997d). *Position paper*

*#4: The responsibility of pharmaceutical education for scholarship, graduate education, fellowships, and postgraduate professional education and training.*

Retrieved from

<http://www.aacp.org/resources/historicaldocuments/Documents/BackgroundPaper4.pdf>

Commission to Implement Change in Pharmaceutical Education. (1997e). *Position paper*

*#5: Maintaining our commitment to change.* Retrieved from

<http://www.aacp.org/resources/historicaldocuments/Documents/BackgroundPaper5.pdf>

- Conrad, C., Haworth, J., & Millar, S. (1993). *A silent success: Master's education in the United States*. Baltimore, MD: John Hopkins University Press.
- Contreras, A. (2004, November 26). A question of degrees. *Chronicle of Higher Education*, 51, p. B24.
- Cook, M., Irby, D., Sullivan, W., & Ludmerer, K. (2006). American medical education 100 years after the Flexner Report. *The New England Journal of Medicine*, 355, 1339- 1344.
- Cooksey, J., Knapp, K., Walton, S., & Cultice, J. (2002). Challenges to the pharmacist profession from escalating pharmaceutical demand. *Health Affairs*, 21, 182-188. doi:10.1377/hlthaff.21.5.182
- Copnell, G. (2010). Modernizing allied health professions careers: Attacking the foundations of the professions? *Journal of Interprofessional Care*, 24, 63-69.
- Council for Opportunity in Education. (2003). *The early history of the Higher Education Act of 1965*. Retrieved from [http://www.pellinstitute.org/downloads/trio\\_clearinghouse](http://www.pellinstitute.org/downloads/trio_clearinghouse)
- Council on Higher Education Association. (2002). *A framework for meeting transfer of credit responsibilities*. Retrieved from [http://www.chea.org/pdf/fact\\_sheet\\_4\\_frame\\_trans\\_02.pdf#search=Transfer%20of%20credits](http://www.chea.org/pdf/fact_sheet_4_frame_trans_02.pdf#search=Transfer%20of%20credits)
- Council on Higher Education Association. (2010a). *The CHEA initiative: Building the future of accreditation*. Retrieved from <http://www.chea.org/About/CI/index.asp>
- Council on Higher Education Association. (2010b). *The recognition of accrediting organizations: Policy and procedures*. Retrieved from [http://www.chea.org/pdf/Recognition\\_Policy-June\\_28\\_2010-FINAL.pdf](http://www.chea.org/pdf/Recognition_Policy-June_28_2010-FINAL.pdf)

- Council on Higher Education Association. (2010c). *Talking points: Accreditation, students and society*. Retrieved from [http://www.chea.org/pdf/2009\\_Talking\\_Points.pdf](http://www.chea.org/pdf/2009_Talking_Points.pdf)
- Council on Higher Education Association. (2012). *The CHEA initiative final report*. Retrieved from [http://www.chea.org/pdf/TheCHEAInitiative\\_Final\\_Report8.pdf](http://www.chea.org/pdf/TheCHEAInitiative_Final_Report8.pdf)
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2003). *Research design, qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publishers.
- Danquah, F., & Miller, S. K. (2007). Cocoa farming in Ghana: Emic experience, etic interpretation. *Southern Rural Sociology*, 22, 65-79.
- Davis, B., & Burnard, P. (1992). Academic levels in nursing. *Journal of Advanced Nursing*, 17, 1395-1400.
- Department of Translational Studies. (2010). The common data set of U.S. higher education terminology. Retrieved from <http://www.uta.fi/FAST/US5/REF/dataset.html>
- Dezalay, Y. & Garth, B. (1996). Fussing about the forum: Categories and definitions as stakes in a professional competition. *Law and Social Inquiry*, 21, 285-312.
- Di Noia, J., & Prochaska, J. (2010). Dietary stages of change and decisional balance: A meta-analytic review. *American Journal of Health Behaviors*, 34, 618-632.
- Dickerson, A. E., & Trujillo, L. (2009). Practitioners' perceptions of the occupational therapy clinical doctorate. *Journal of Allied Health*, 38(2), E47-E54.
- DiMaggio, P., & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*,

48, 147-160.

Domholdt, E., Kerr, L., & Mount, K. (2006). Professional (entry-level) doctoral degrees in physical therapy: Status as of Spring 2003. *Journal of Physical Therapy Education, 20*, 68-76.

Domholdt, E., Stewart, J., Barr, J., & Melzer, B. (2002) Entry-level doctoral degrees in physical therapy: Status as of Spring 2000. *Journal of Physical Therapy Education, 16*, 60-68.

Douglas, W. (2005, November-December). Nursing considers clinical practice doctorate degree. *Texas Nursing, 79*. Retrieved from [http://www.texasnurses.org/associations/8080/files/2005\\_Nov-Dec-DNP.pdf](http://www.texasnurses.org/associations/8080/files/2005_Nov-Dec-DNP.pdf)

Eaton, J. S. (Spring, 2009). Accreditation in the United States. *New Directions for Higher Education, 145*, 79-86. doi:10.1002/he.337

Elenbaas, R., & Worthen, D. (2009). Transformation of a profession: An overview of the 20th century. *American Institute of the History of Pharmacy, 51*, 151-182.  
Retrieved from [www.aihp.org](http://www.aihp.org)

Ellis, L. (2007). Academics' perceptions of the professional or clinical doctorate: Findings of a national survey. *Journal of Clinical Nursing, 16*, 2272-2279.  
doi:10.1111/j.1365-2702.2007.02120.x

Engel, C. (2000). Health professions education for adapting to change and for participating in managing change. *Education for Health, 13*, 37-43.

FDCH32Y3429940466: *School Accreditation FDCH Congressional Testimony*, Hearing before the Subcommittee on 21st Century Competitiveness Committee on House Education and the Workforce. 107th Cong. (2002) (Testimony of Judith Eaton).

Fenge, L. (2009). Professional doctorates—A better route for researching professionals?

- Social Work Education*, 2, 165-176.
- Fingeld, D., Wongvatunyu, S., Conn, V., Grando, V., & Russell, C. (2003) Health belief model and reversal theory: A comparative analysis. *Journal of Advanced Nursing*, 43, 288-297.
- Fraher, E. (2007). *The move toward the clinical doctorate in the allied health professions in North Carolina* (PowerPoint slides). Retrieved from [www.shepscenter.unc.edu/hp/.../clinical\\_doctorate\\_010307.ppt](http://www.shepscenter.unc.edu/hp/.../clinical_doctorate_010307.ppt)
- Freburger, J., King, J., & Slifkin, R. (2008). *The trend toward the clinical doctorate in Allied Health: Implications for rural communities*. Chapel Hill, NC: Rural Health Research and Policy Centers.
- Friedman, A., & Phillips, M. (2004). Balancing strategy and accountability: A model for the governance of professional associations. *Nonprofit Management & Leadership*, 15, 187-204.
- Gall, D. G., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). New York, NY: Longman Publishers.
- Glazer, J. (1986). *The master's degree: Tradition, diversity, innovation*. Washington, DC: Association for the Study of Higher Education.
- Glazer-Raymo, J. (2005). *The master's degree in the marketplace*. San Francisco, CA: Jossey-Bass.
- Graca, T. J. (2009). Accreditation's legal landscape. *Community College Journal of Research and Practice*, 33, 642-649. doi: 10.1080/10668920903034925
- Greenwood, R., & Hinings, C. (1996). Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 21, 1022-1054.



- Greenwood, R., Suddaby, R., & Hinings, C. (2002). Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45, 58-80.
- Griffiths, Y., & Padilla, R. (2006). National status of the entry-level doctorate in occupational therapy (OTD) (Survey). *American Journal of Occupational Therapy*, 60, 540-551.
- Gruen, T., Summers, J., & Acito, F. (2000). Relationship marketing activities, commitment, and membership behaviors in professional associations. *Journal of Marketing*, 64, 34-49.
- Hampton, G., & Hampton, D. (2004). Relationship of professionalism, rewards, market orientation and job satisfaction among medical professionals: The case of certified nurse-midwives. *Journal of Business Research*, 57, 1042-1053.
- Hawkins, R., Roemheld-Hamm, B., Ciccone, A., Mee, J., & Tallia, A. (2009). A multimethod study of needs for physician study: Implications for education and regulation. *Journal of Continuing Education in the Health Professions*, 29, 220-234.
- Haworth, J., Conrad, C., & Polster, A. (2012). *Gale encyclopedia of education: Master's Degree*. Chicago, IL: Macmillian Reference USA. Retrieved from <http://www.gale.cengage.com/servlet/ItemDetailServlet>
- Head, L. (2004, August). *Kathleen Mears Memorial Lecture: Educating the workforce*. Presented at the ASET Annual Convention, Alexandria, VA.
- Health Practitioners Monitoring Program, Code of Virginia 54.1-2505 (1986). Retrieved from <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+54.1-2505>
- Health Professions Act, RSBC 1996, Chapter 183. (1996). Victoria, British Columbia,

- Canada. Retrieved from  
[www.bclwas.ca/EPLibraries/bclaws\\_new/document/ID/freeside/00\\_96183\\_01](http://www.bclwas.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96183_01)
- Hebel, S. (2010, March 14). States seek ways to take measure of college degrees.  
*Chronicle of Higher Education*, 57, pp. A1-A22.
- Higher Learning Commission. (2006) *A Report to the Board of Trustees from the Task Force on the Professional Doctorate*. Retrieved from  
<https://content.springcm.com/.../DownloadDocuments.ashx>
- Holland, R., & Nimmo, C. (1999a). Transitions in pharmacy practice, part 2: Who does what and why. *American Journal of Health-System Pharmacists*, 56, 1981-1987.
- Holland, R., & Nimmo, C. (1999b). Transitions in pharmacy practice, part 3: Effecting change—the three-ring circus. *American Journal of Health-System Pharmacists*, 56, 2235-2241.
- Holland, R., & Nimmo, C. (1999c). Transitions in pharmacy practice, part 4: Can a leopard change its spots? *American Journal of Health-System Pharmacists*, 56, 2458-2462.
- Hughes, C. (2012). *Developing reflexivity in research*. Retrieved from  
[http://www2.warwick.ac.uk/fac/soc/sociology/staff/academicstaff/chughes/hughes\\_c\\_index/teachingresearchprocess/reflexivity/](http://www2.warwick.ac.uk/fac/soc/sociology/staff/academicstaff/chughes/hughes_c_index/teachingresearchprocess/reflexivity/)
- Huisman, J., & Naidoo, R. (2006). The professional doctorate: From Anglo-Saxon to European challenges. *Higher Education Management and Policy*, 18, 1-12.
- Hunt, S. (2009) Transatlantic recognition issues: Seeking new directions in the twenty-first century. *Study in Education: Principles, Policy & Practice*, 16, 65-81.  
doi:10.1080/09695940802704112
- IDEA. (2006, June). *Social Cognitive Theory (SCT)*. Retrieved from

<http://www.idea.org/blog/2006/06/01/social-cognitive-theory-sct/>

Institute of Medicine. (1999). *To err is human: Building a safer health system*.

Washington, DC: National Academy Press.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.

Janus Commission. (1997, October). *Approaching the millennium: The report of the*

*AACP Janus Commission*. Retrieved from

[http://www.aacp.org/resources/historicaldocuments/Documents/Janus\\_Commission.pdf](http://www.aacp.org/resources/historicaldocuments/Documents/Janus_Commission.pdf)

Jolley, J. (2007). Choose your doctorate. *Journal of Clinical Nursing*, 16, 225-233. doi: 10.1111/j.1365-2702.2006.01582.x

Kendig, H. (1948). Report of a committee to study the question of a professional degree to be awarded upon the completion of a curriculum covering more than four years of study. *American Journal of Pharmaceutical Education*, 12, 783-785.

King, J., Freburger, J., & Slifkin, R. (2010). What does the clinical doctorate in physical therapy mean for rural communities? *Physiotherapy Research International*, 15, 24-34. doi:10.1002/pri.455

Kirch, D. (2011). Higher education and health care at a crossroads. *Trusteeship*, 2, n.p. Retrieved from <http://agb.org/trusteeship/2011/3/higher-education-and-health-care-crossroads>

Kohler, P., & Parham, J. (2008). Establishing a regional academic health campus. In D. E. Holmes (Ed.), *From education to regulation: Dynamic challenges for the health workforce* (pgs. 63-85). Washington, DC: Association of Academic Health Centers.

- Kontogianes, J. (2004). Crossing the great medical divide: A bridge program for pharmacy education. *Community College Journal of Research and Practice*, 28, 47-48. doi:10.1080/10668920490252033
- Kraft, P., Sutton, S., & McCreath, H. (1999). The Transtheoretical Model of Behavior Change: Are the stages qualitatively different? *Psychology & Health*, 14, 433-461.
- Kreling, D., Doucette, W., Chang, E., Gaither, C., Mott, D., & Schommer, J. (2010). Practice characteristics of bachelor of science and doctor of pharmacy degreed pharmacists based on the 2009 National Workforce Survey. *American Journal of Pharmaceutical Education*, 74, 159-168. Retrieved from [www.ncbi.nlm.nih.gov/pmc/articles/PMC2996749](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2996749)
- Kushner, R., & Poole, P. (1996). Exploring structure-effectiveness relationships in nonprofit arts organizations. *Nonprofit Management and Leadership*, 7, 119-136.
- LaBelle, T. (2004). *Credential inflation and the professional doctorate in California higher education*. (Research and Occasional Paper Series: CSHE.1.04). Retrieved from <http://escholarship.org/uc/item/1s98k07z>
- Lalonde, A., Menendez, H., & Perron, L. (2010). The role of health professional associations in the promotion of global women's health. *Journal of Women's Health*, 19, 2133-2137.
- Lester, S. (2004). Conceptualizing the practitioner doctorate. *Studies in Higher Education*, 29, 757-770.
- Liao, H., Wang, S., & Chai, H. (2007). Systems of entry-level physical therapy education in Taiwan. *Physical Therapy Reviews*, 12, 129-138.
- Loochtan, A. (2011). *Creepy tale 2... Consequences of degree creep in health professions*

- (PowerPoint slides). Retrieved from  
[www.nn2.org/images/HPN\\_Degree\\_Creep\\_407.ppt](http://www.nn2.org/images/HPN_Degree_Creep_407.ppt)
- Luke, R., Soloman, P., Baptiste, S., Hall, P., Orchard, C., Rukholm, E., & Carter, L. (2009). On-line interprofessional health sciences education: From theory to practice. *Journal of Continuing Education in the Health Professions*, 29, 161-167.
- Lumina Foundation for Education. (2010). *A stronger nation through higher education. A special report*. Retrieved from  
[http://www.luminafoundation.org/publications/A\\_stronger\\_nation.pdf](http://www.luminafoundation.org/publications/A_stronger_nation.pdf)
- Macnee, C. L., & McCabe, S. (2008). *Understanding nursing research* (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Macpherson, R. (2010). Attitudes and intentions of New Zealand educators about preparing for and succeeding in educational leadership roles: Implications for national leadership development strategy and professional association. *ISEA*, 38, 115-149.
- Malterud, K. (2001). Qualitative research: Standards, challenges, and guidelines. *The Lancet*, 358, 483-488.
- Manasse, H. (1989). Medication use in an imperfect world I: Drug misadventuring as an issue of public policy. *Am J Hosp Pharm.*, 46, 929- 44.
- Marion, R. (2005) *Leadership in education: Organizational theory for the practitioner*. Long Grove, IL: Waveland Press.
- McMurtrie, B. (1999, November 12). Assessing the group that assesses accreditation. *Chronicle of Higher Education*, 46, pp. A41-A42.
- Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis*. San Francisco, CA: Josey-Bass Publishers.

- Miller, W. (1989). Planning for pharmacy education in the 21st century: AACP's leadership role. *American Journal of Pharmacy Education*, 53, 336-339.
- Morgan, R., & Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 20-38.
- Murray, V. (1996). Three booklets and three books on nonprofit boards and governance. *Nonprofit Management and Leadership*, 7, 439-445. doi: 10.1002/nml.4130070409
- Nair, M., & Webster, P. (2010). Education for health professionals in the emerging market economies. *Medical Education*, 44, 856-863.
- National Association of State Administrators and Supervisors of Private Schools. (2011). *Understanding accreditation*. Retrieved from <http://www.naasps.org/accreditation-101>
- National Center for Educational Statistics (NCES). (2008). *Digest of education statistics*. Retrieved from <http://nces.ed.gov/programs/digest>
- National Institutes of Health. (2011). *Lobbying activities*. Retrieved from <http://ethics.od.nih.gov/topics/lobbying.htm>
- National Organization for Competency Assurance (NOCA). (2006). *NOCA's basic guide to credentialing terminology*. Retrieved from <http://www.noca.org/Resources/Publications/taabid/77/Default.aspx>
- Neal, A. (2008). Seeking higher ed accountability: Ending federal accreditation. *Change*, 40, 24-38.
- Nemec, P., & Legere, L. (2008). Workforce credentials. *Psychiatric Rehabilitation Journal*, 32, 138-140.
- Neumann, R. (2005). Doctoral differences: Professional doctorates and Ph.D.s compared.

- Journal of Higher Education Policy and Management*, 27, 173-188.
- Nona, D. A. (1990). Annual report of the American Council on Pharmaceutical Education to the profession and the public. *American Journal of Pharmaceutical Education*, 54, 203.
- O'Brien, E. (1992). Master's degree students and recipients: A profile. *ACE Research Briefs*, 3, 1-14.
- O'Neal, E., & the Pew Health Professions Commission (1998) *Recreating health professional practice for a new century*. San Francisco, CA: Pew Health Professions Commission.
- Oregon State University College of Pharmacy. (2012). *Doctor of pharmacy frequently asked questions*. Retrieved from <http://pharmacy.oregonstate.edu/future-students/pharmd/faq>
- O'Sullivan, A., Carter, M., Marion, L., Pohl, J., & Werner, K. (2005). Moving forward together: The practice doctorate in nursing. *Online Journal of Issues in Nursing*, 10, 99-113. Retrieved from [www.nursingworld.org/OJIN](http://www.nursingworld.org/OJIN)
- Painter, J. E., Borba, C. P., Hynes, M., Mays, D., & Glanz, K. (2008). The use of theory in health behavior research from 2000 to 2005: A systematic review. *Annals of Behavioral Medicine*, 35, 358-362.
- Park, C. (2005). New variant PhD: The changing nature of the doctorate in the UK. *Journal of Higher Education Policy and Management*, 27, 189-207.
- Parkerson, G., Connis, R., Broadhead, W., Patrick, D., Taylor, T., & Tse, C. (1993). Disease-specific verses generic measurement of health-related quality of life in insulin-dependent diabetic patients. *Medical Care*, 31, 629-639.
- Patton, M. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand

- Oaks, CA: Sage Publications.
- Ph.D.—club or history? (2004). *Nature*, 429, 789.
- Phelps, M., & Gerbasi, F. (2009). Accreditation requirements for practice doctorates in 14 healthcare professions. *AANA Journal*, 77, 19-26.
- Professional Societies and Associations. (2010). *Interdisciplinary networking, publications, and conferences are a few of the benefits of society membership*. Retrieved from <http://www.appliedclinicaltrialsonline.com>
- Random House Unabridged Dictionary* (2nd ed.). (2005). New York, NY: Random House Publishers.
- Rapport, M. J., Stelzner, D., & Rodriguez, J. (2007). The doctor of physical therapy degree: A new curriculum for a new degree. *Physical Disabilities: Education and Related Services*, 26, 63-76.
- Redding, C., Rossi, J., Rossi, S., Velicer, W., & Prochaska, J. (2000). Health behavior models. *The International Electronic Journal of Health Education*, 3, 180-193. Retrieved from <http://www.iejhe.siu.edu>
- Rothstein, R., Jacobsen, R., & Wilder, T. (2009) From accreditation to accountability. *Phi Delta Kappan*, 90, 625-629.
- Rowley, J. (2002). Using case studies in research. *Management Research News*, 25, 16-27.
- Royeen, C., & Lavin, M. (2006). A contextual and logical analysis of the clinical doctorate for health practitioners: Dilemma, delusion, or de facto? *Journal of Allied Health*, 36, 101-106.
- Ruud, C., Bragg, D., & Townsend, B. (2010). The applied baccalaureate degree: The right time and place. *Community College Journal of Research and Practice*, 34,



136-152. doi:10.1080/1066890903385897

- Schray, V. (2006a). *Assuring quality in higher education: Key issues and questions for changing accreditation in the United States*. Washington, DC: The Secretary of Education's Commission on the Future of Higher Education.
- Schray, V. (2006b). *Assuring quality in higher education: Recommendations for improving accreditation*. Washington, DC: The Secretary of Education's Commission on the Future of Higher Education.
- Scott, D., Brown, A., Lunt, I., & Thorne, L. (2004). *Professional doctorates: Integrating professional and academic knowledge*. Milton Keynes, England: Open University Press.
- Siler, W., & Smith Randolph, D. (2006, July 21). A clinical look at clinical doctorates. *Chronicle of Higher Education*, 52, p. 58.
- Spurr, S. (1970). *Academic degree structures: Innovative approaches-principles of reform in degree structures in the United States*. New York, NY: McGraw-Hill.
- Stake, R. (1978). The case study method in social inquiry. *Educational Researcher*, 7, 5-8.
- Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: SAGE Publications.
- Swanchak, L. (2010). *The perceptions of changing the entry-level degree for physician assistants to a clinical doctorate among physician assistant students* (Doctoral Dissertation). Retrieved from Proquest. (3407214)
- Task Force on Prescription Drugs. (1967). *Final report*. Washington, DC: Department of Health, Education, and Welfare. Retrieved from <http://www.ssa.gov/history/ssa/lbjmedicare7.html>

- Task Force on the Professional Doctorate. (2006). *A report to the board of trustees from the Task Force on the Professional Doctorate*. The Higher Learning Commission: North Central Association of Colleges and Schools. Retrieved from [www.ncahlc.org/Information-for-Institutions/publications.html](http://www.ncahlc.org/Information-for-Institutions/publications.html)
- Tennant, M. (2004). Doctoring the knowledge worker. *Studies in continuing education*, 26, 431-440.
- Thelin, J. (2004). *A history of American higher education*. Baltimore, MD: The John Hopkins University Press.
- Thomas, L. (2010). *Factors affecting nurse educators' decision to teach* (Doctoral Dissertation). University of Louisville, Louisville, KY.
- Threlkeld, J., Jensen, G., & Royeen, C. (1999). The clinical doctorate: A framework for analysis in physical therapy education. *Physical Therapy*, 79, 567-581.
- U.S. Department of Education. (2011a). *National recognition of accrediting agencies by the U.S. Secretary of Education*. Retrieved from [www2.ed.gov/admins/finaid/accred/accreditation\\_pg3.html#Recognition](http://www2.ed.gov/admins/finaid/accred/accreditation_pg3.html#Recognition)
- U.S. Department of Education. (2011b). *Part 602 – Secretary's recognition of accrediting agencies*. Retrieved from [www2.ed.gov/admins/finaid/accred/accreditation\\_pg11.html](http://www2.ed.gov/admins/finaid/accred/accreditation_pg11.html)
- Varhol, P. (2000, September). Weighing the pros and cons of vender-specific certifications. *Technology Consultant*, 199-201.
- Wakefield, M. (1999). Have license, will travel. *Nursing Economics*, 17, 114-116.
- Wall, B. M., Novak, J. C., & Wilkerson, S. A. (2005). Doctor of nursing practice program development: Reengineering health care. *Journal of Nursing Education*, 44, 396-403.

- Wallace, J. (1995). Organizational and professional commitment in professional and nonprofessional organizations. *Administrative Science Quarterly*, 40, 228-255.
- Weiss, C. (1998). *Evaluation* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Wergin, J. (2005). Higher education: Waking up to the importance of accreditation. *Change*, 37, 35-41.
- Wiebe, E., Eurepos, A., & Mills, J. (Eds). ( 2010). *Encyclopedia of case study research*. Thousand Oaks, CA: SAGE Publications, Inc.
- Williams-Piehota, P., Sirois, F., Bann, C., Isenberg, K., & Walsh, E. (2011). Agents of change: How do complementary and alternative medicine providers play a role in health behavior change? *Alternative Therapies*, 17, 22-30.
- Wilson, D. (1995). An integrated model of buyer-seller relationships. *Journal of the Academy of Marketing Science*, 23, 335-345.
- Wolf, H. (2003). Commission to implement change in pharmacy education, AACP. *Encyclopedia of Clinical Pharmacy*, 210-212. doi: 10.1081/E-ECP120006188
- World Education Services. (2010). *Common data set of U.S. higher education terminology*. Retrieved from <http://www.uta.fi/FAST/US5/REF/dataset.html>
- World Health Organization (WHO). (2012). *Health service delivery*. Retrieved from <http://www.who.int/healthsystems/topics/delivery/en/index.html>
- Worthen, D. (Ed.). (2006). *The Millis Study Commission on Pharmacy: A road map to a profession's future*. New York, NY: Pharmaceutical Products Press.
- Yin, R. (2009). *Case study research: Designs and Methods* (4th ed). Thousand Oaks, CA: SAGE Publications, Inc.

APPENDIX A  
INTERVIEW SCHEDULE MAPPED TO RESEARCH QUESTIONS

## Appendix A

### Interview Schedule Mapped to Research Questions

These interview questions are intended to provide a retrospective understanding from key individuals who were decision makers for the transition to the entry-level Pharm.D. in pharmacy education. The transition to the Pharm.D. was a long process and faced controversies and tradeoffs that will be addressed in this interview. The respondents have the benefit of hindsight and your reflections may profit other health professions that are contemplating the transition to the clinical doctorate as the entry-level degree into practice.

Research questions are in bold. Interview schedule queries are numbered IS1, IS2, IS3, etc.

#### **1. What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

##### **a. Health professions education?**

IS1. In general, what benefits do you think the Pharm.D. has had on Pharmacy education?

IS2. To what extent has the curriculum/knowledge base changed for students? What have been some of the trade-offs for changes in the curriculum/knowledge base for students?

IS3. The entry-level degree into Pharmacy practice changed from a Master's to a Pharm.D. Why was the Pharm.D. chosen instead of a Ph.D.? How did this change the structure of the educational programs? Were more clinical hours required or length in program? Have institutions made the necessary changes?

IS4. Educational institutions had the responsibility of creating new Pharm.D. programs that satisfied the accreditation requirements. One controversy of the changeover has been the charge of "degree creep." Do you feel that programs have been successful in elevating the educational experience to the level anticipated.

IS5. Was there a formal, structured plan developed to assist educational institutions through challenges associated with the transition? What resources have been available to institutions and program leaders in regard to establishing curricular changes, faculty credentials, funding sources to implement the change, etc?

##### **b. Delivery of services?**

IS6. The profession adopted the mission of "pharmaceutical care" as more comprehensive, going beyond dispensing medications. Do you think the profession has been successful in becoming primary pharmaceutical care providers?

IS7. How have the state regulatory agencies accommodated the advanced knowledge and skill base of the pharmaceutical professional? Have they expanded the scope of practice and revised the licensure requirements?

IS8. How has the distribution of services been affected? For example, what effect has the Pharm.D. had on rural or underserved communities?

IS9. There were many opinions voiced in publications about how the Pharm.D. would affect the delivery of service. Some reported that with the increased autonomy, the pharmacist would have direct patient contact and be the primary manager of the patient pharmaceutical needs. Others reported that with the increase in knowledge and skill, the new Pharm.D. would focus on increased financial opportunities and move away from direct patient care. Now, 20 years after the mandate, how do you think the delivery of pharmaceutical services has changed?

IS10. In hindsight, what roles and responsibilities of the pharmacy profession have been most affected by the Pharm.D.? Which elements of professional practice have benefited from the degree change and which ones did not change as anticipated?

**c. Interdisciplinary relationship of practicing clinicians?**

IS11. Compare the status of pharmacy as a field within the hierarchy of the health care industry in regards to:

- i. salary?
- ii. prestige?
- iii. supply and demand?

IS12. How has the interaction between Pharmacists and other autonomous providers changed, e.g., medical doctors, osteopathic physicians, or dentists? Is there more of a partnership? Any conflicts?

IS13. Once the clinical practice of pharmacy was established as the professional philosophy, what type of strategic plan was developed to inform and educate members of other healthcare disciplines about the expansion of knowledge, skills, and abilities of the pharmacy profession?

IS14. Do you recall what opportunities and threats from other disciplines were presented during the decision-making process? What strategies were implemented to embrace the opportunities or counteract the threats?

IS15. Retrospectively, what are the trade-offs that have come from the transition to the Pharm.D? To what extent do you think that was recognized as being an issue at the time that the transition was first implemented?

**d. Societal and economic landscape of the health care industry (cost-benefit)?**

IS16. How does the change to the Pharm. D. serve the greater good?

IS17. Think about the strategic plan that the Pharm.D. represented as a policy change. Retrospectively, to what extent has the “turf” of the health care fields changed due to the implementation of the Pharm.D? How much did the balance of power between healthcare professionals actually change? How much did the perceptions of prestige, professional scope of practice for pharmacists actually change?

IS18. What is your perception on how the Pharm.D. is viewed by the general public? Do you think that the general population is familiar with the advanced knowledge, skills, and abilities of pharmacists?

IS19. What is your sense about the public’s perceptions about the prestige of a Pharm.D.? The public’s sense of advanced degrees and the people who earn them? The effects on society as a whole?

IS20. What is your perception about society and the need for more classifications of credentials or degrees?

## **2. What is the transferability of an entry-level clinical doctorate related to professional opportunities?**

IS21. What is the transferability of an entry-level clinical doctorate related to professional opportunities, in theory? and Empirically?

IS22. What opportunities have evolved to allow the pharmacy profession to meet more effectively the health care needs of society since the Pharm.D.?

IS23. What are your perceptions about how the Pharm.D. has enhanced the professionalization of pharmacists? How? Why?

IS24. The decision to transition from a master’s to a clinical doctorate begins with the internal decision and a strong rationale by the profession that change is warranted. What are some of the external forces that are behind the progression of the clinical doctorate as an entry-level degree that pertain to all other disciplines that are undergoing the same transformation? Based on your retrospective, what are the trade-offs/conflicts that other disciplines may face?

IS25. Inevitably, policy change leads to latent and unexpected developments. Retrospectively, what do you think was the biggest surprise that resulted from the change to the Pharm.D.? The biggest disappointment?

IS26. The conversation of the clinical doctorate is occurring on a global level. The UK and Australia are experiencing their own transformations within health professions. Was the impact of the Doctor of Pharmacy on the professional on a global level discussed during the decision-making process? Considerations such

as the equality of the scope of practice from country-to-country, educational requirements, licensing processes, etc.?

IS27. Can you think of anything else that might be relevant? Anything on power? Backlash? Positive effects? Other?



APPENDIX B  
DOCUMENT ANALYSIS PROTOCOL

## Appendix B

### Document Analysis Protocol

These document analysis items are intended to provide background information and verify the knowledge and skills of key individuals who were decision makers for the transition to the entry-level degree in pharmacy education. The protocol provides a structured approach for obtaining details from each individual's curriculum vitae. This provides consistent data from documents (CVs) that are highly personalized, with no set template for presentation. The protocol is applied preliminary to the interviews, giving the researcher a better sense of how each subject fits into the wider policy matrix when the full interview is conducted.

DA 1. What is the full name of the individual being interviewed?

DA 2. What type of degree and university/certifications does the interviewee hold? What year was each degree received?

DA 3. What is the current occupation of the interviewee?

DA 4. Outline the professional experience of the interviewee?

DA 5. From the four stakeholder domains, list the person's involvement, position held, and years of service.

DA 6. Note any unique qualities or experiences of the individual.

DA 7. List three things that are important for the interview.

DA 8. List two things that the document tells the researcher about the person at the time it was written.

DA 9. Write a question to the individual that is left unanswered by the document.

DA 10. Note any authored publications that are directly related to this research study.

DA 11. What is the date of the document? Is it the most recent edition?

DA 12. Confirm current contact information for the interviewee.

## APPENDIX C

### INTERVIEW SCHEDULE

## Appendix C

### Interview Schedule

The questions in the Interview Schedule focused on retrospective insights and effects of participants involved in the decision to make the Pharm.D. the entry-level degree for pharmacy.

IS1. In general, what benefits do you think the Pharm.D. has had on Pharmacy education?

IS2. To what extent has the curriculum/knowledge base changed for students? What have been some of the trade-offs for changes in the curriculum/knowledge base for students?

IS3. The entry-level degree into Pharmacy practice changed from a Master's to a Pharm.D. Why was the Pharm.D. chosen instead of a Ph.D.? How did this change the structure of the educational programs? Were more clinical hours required or length in program? Have institutions made the necessary changes?

IS4. Educational institutions had the responsibility of creating new Pharm.D. programs that satisfied the accreditation requirements. One controversy of the changeover has been the charge of "degree creep." Do you feel that programs have been successful in elevating the educational experience to the level anticipated?

IS5. Was there a formal, structured plan developed to assist educational institutions through challenges associated with the transition? What resources have been available to institutions and program leaders in regard to establishing curricular changes, faculty credentials, funding sources to implement the change, etc?

IS6. The profession adopted the mission of "pharmaceutical care" as more comprehensive, going beyond dispensing medications. Do you think the profession has been successful in becoming primary pharmaceutical care providers?

IS7. How have the state regulatory agencies accommodated the advanced knowledge and skill base of the pharmaceutical professional? Have they expanded the scope of practice and revised the licensure requirements?

IS8. How has the distribution of services been affected? For example, what effect has the Pharm.D. had on rural or underserved communities?

IS9. There were many opinions voiced in publications about how the Pharm.D. would affect the delivery of service. Some reported that with the increased autonomy, the pharmacist would have direct patient contact and be the primary manager of the patient pharmaceutical needs. Others reported that with the increase in knowledge and skill, the new Pharm.D. would focus on increased financial opportunities and move away from direct patient care. Now, 20 years after the mandate, how do you think the delivery of pharmaceutical services has changed?

IS10. In hindsight, what roles and responsibilities of the pharmacy profession have been

most affected by the Pharm.D.? Which elements of professional practice have benefited from the degree change and which ones did not change as anticipated?

IS11. Compare the status of pharmacy as a field within the hierarchy of the health care industry in regards to:

- i. salary?
- ii. prestige?
- iii. supply and demand?

IS12. How has the interaction between Pharmacists and other autonomous providers changed, e.g., such as medical doctors, osteopathic physicians, or dentists? Is there more of a partnership? Any conflicts?

IS13. Once the clinical practice of pharmacy was established as the professional philosophy, what type of strategic plan was developed to inform and educate members of other healthcare disciplines about the expansion of knowledge, skills, and abilities of the pharmacy profession?

IS14. Do you recall what opportunities and threats from other disciplines were presented during the decision-making process? What strategies were implemented to embrace the opportunities or counteract the threats?

IS15. Retrospectively, what are the trade-offs that have come from the transition to the Pharm.D.? To what extent do you think that was recognized as being an issue at the time that the transition was first implemented?

IS16. How does the change to the Pharm. D. serve the greater good?

IS17. Think about the strategic plan that the Pharm.D. represented as a policy change. Retrospectively, to what extent has the “turf” of the health care fields changed due to the implementation of the Pharm.D.? How much did the balance of power between healthcare professionals actually change? How much did the perceptions of prestige, professional scope of practice for pharmacists actually change?

IS18. What is your perception on how the Pharm.D. is viewed by the general public? Do you think that the general population is familiar with the advanced knowledge, skills, and abilities of pharmacists?

IS19. What is your sense about the public’s perceptions about the prestige of a Pharm.D.? The public’s sense of advanced degrees and the people who earn them? The effects on society as a whole?

IS20. What is your perception about society and the need for more classifications of credentials or degrees?

IS21. What is the transferability of an entry-level clinical doctorate related to professional opportunities, in theory? and Empirically?

IS22. What opportunities have evolved to allow the pharmacy profession to meet more effectively the health care needs of society since the Pharm.D.?

IS23. What are your perceptions about how the Pharm.D. has enhanced the professionalization of pharmacists? How? Why?

IS24. The decision to transition from a master's to a clinical doctorate begins with the internal decision and a strong rationale by the profession that change is warranted. What are some of the external forces that are behind the progression of the clinical doctorate as an entry-level degree that pertain to all other disciplines that are undergoing the same transformation? Based on your retrospective, what are the trade-offs/conflicts that other disciplines may face?

IS25. Inevitably, policy change leads to latent and unexpected developments. Retrospectively, what do you think was the biggest surprise that resulted from the change to the Pharm.D.? The biggest disappointment?

IS26. The conversation of the clinical doctorate is occurring on a global level. The UK and Australia are experiencing their own transformations within health professions. Was the impact of the Doctor of Pharmacy on the professional on a global level discussed during the decision-making process? Considerations such as the equality of the scope of practice from country-to-country, educational requirements, licensing processes, etc.?

IS27. Can you think of anything else that might be relevant? Anything on power? Backlash? Positive effects? Other?

## APPENDIX D

### INFORMATION TO EXPERT PANEL MEMBERS

Appendix D  
Letter to Expert Panel Members

Researcher's Address

Expert Panel Member's address

Dear Expert Panel Member:

I am a student in the Doctoral Program at Western Kentucky University. I am completing a research project under the direction of Dr. Stephen Miller, College of Education and Behavioral Sciences, Department of Educational Administration, Leadership, and Research at Western Kentucky University.

The qualitative research project is titled "A Case Study on Pharmacy Accreditation Governing Agency on the Benefits, Risks, and Alternatives of the Doctorate as the ENTRY-LEVEL Degree." This study is an study of how the transition to the clinical doctorate in one profession, Pharmacy, was perceived during the establishment and implementation phases of the Doctor of Pharmacy.

The purposeful sample will come from members of the Commission to Implement Change in Pharmaceutical Education, the Janus Commission, the AACP Board of Directors, and the ACPE Board of Directors that served from 1989 – 2002.

The participant will provide a current curriculum vitae followed by a semi-structured interview. I would like feedback into the questions on the interview. I have attached the interview schedule as mapped to the research questions. I would like for you to review the set of questions and provide feedback on the forms included.

I believe this project is of importance to understanding the process of elevating a professional entry-level degree to a practice doctorate, a trend that is occurring in health professions. Your feedback will help me improve the clarity and concision of the questions, ensuring the most information from the subjects.

Thank you for your time. Please contact me by phone (314-616-4694) or email (heidi.crocker682@wku.edu) if you are unclear what the task is or if you are unable to participate. Your anticipated cooperation is appreciated.  
Sincerely,

Heidi M. Crocker, D.C., M.A.



## Appendix D

### Expert Review of Interview Schedule

Please respond to the following questions regarding concerns affecting the Pharm.D. as the entry-level degree into Pharmacy decision. Comments may be written directly on the instrument. If additional space is needed, please attach a separate sheet of paper and specify to which item your comments refer.

Please note that the research questions were developed from the literature and theoretical perspective included in Chapter II. If you would like to examine this section, please contact me and I will provide you with a copy.

Thank you again for your time.

The Interview Schedule Mapped to Research Questions (Appendix A) is attached for your convenience.

#### 1. Introduction:

Is the introductory statement of purpose clear?

#### 2. Format:

Is the format clear?

Easy to follow?

Are the questions clear and understandable?

#### 3. Topics:

Is the wording appropriate for pharmacy leaders?

Do the questions make sense in terms of content?

#### 4. Directions?

Are the directions clear and understandable to the interviewee?

#### 5. Feasibility?

Is the instrument practical?

Is the instrument too long?

#### 6. Do you have any general comments or suggestions on the overall format and

presentation of the interview schedule?

7. Do you have any final thoughts about the constructs? Any particular suggestions?

Thank you for your time and effort!

## APPENDIX E

### LETTER TO STUDY PARTICIPANTS

Appendix E  
Letter to study participants

April 9, 2012

Researcher's Address

Recipient's Address Dear Recipient:

I am a student in the Educational Leadership Doctoral Program at Western Kentucky University. I am completing a research project under the direction of Dr. Stephen Miller, College of Education and Behavior Sciences, Department of Educational Administration, Leadership, and Research at Western Kentucky University.

You are being invited to participate in a qualitative research project entitled "A Case Study on Pharmacy Accreditation Governing Agency on the Benefits, Risks, and Alternatives of the Doctorate as the ENTRY-LEVEL Degree." This study is an study of how the transition to the clinical doctorate in one profession, Pharmacy, was perceived during the establishment and implementation phases of the Doctor of Pharmacy. For this research, members of the Commission to Implement Change in Pharmaceutical Education, the Janus Commission, the AACP Board of Directors, and the ACPE Board of Directors that served from 1989-2002 will be interviewed to determine perceptions about the dynamic changes that have been made related to the Doctor of Pharmacy mandate. Specifically, this study will explore the perceptions on the benefits, risks, and alternatives that were considered in the decision-making process and the impact that the transition to the clinical doctorate has had on pharmaceutical education, the Pharmacy profession, and society.

Two instruments will be used to gather information. Prior to participation, you will be required to complete a consent form. Then, before the interview, you will be asked to complete a short background questionnaire. A semi-structured format with open-ended questions will be used for the interview. The approximately one hour recorded session will be conducted by your method of choice: face-to-face, videoconference, or telephone, at a mutually agreed upon time.

Be assured that there are no physical, psychological, financial, or legal risks to you or any participant associated with this study. The benefits gained from your participation will provide information about the key policy and operational issues, as well as the complications of the change process during the transition to the clinical doctorate as the entry-level degree. The dialogue occurring in many health professions may be enhanced by the query of other professions that have moved toward clinical doctorates to discover commonalities in pursuing a higher entry-level degree.

Absolute confidentiality cannot be guaranteed; however, data will be held in confidence to the extent permitted by law. All information collected may be reviewed by Dr. Miller and/or others associated with the research study.

Your participation in this study is voluntary. You are free to withdraw your consent at any time without penalty. You are free to decline to answer any particular question that may make you feel uncomfortable.

If you have any questions, please contact myself or Dr. Miller. You may contact the Human Studies Committee offices at Western Kentucky University to discuss any questions about your rights as a research subject, in confidence, with a member of the

respective committee. These are independent committees composed of faculty and staff of Western Kentucky University. The committees have reviewed this study.  
Sincerely,

Heidi M. Crocker, D.C., M.A.

Cell: (314) 616-4694 Email: [heidi.crocker682@topper.wku.edu](mailto:heidi.crocker682@topper.wku.edu)

Dr. Miller: (270) 745-6901

WKU Human Studies Committee office: (270) 745-6733

## APPENDIX F

### CONSENT FORM



### INFORMED CONSENT

Project Title: A Case Study on Pharmacy Accreditation Governing Agency on the Benefits, Risks, and Alternatives of the Doctorate as the ENTRY-LEVEL Degree

Investigator: Heidi M. Crocker, WKU Educational Leadership Doctoral Program

Telephone: (314) 616-4694 Email: [heidi.crocker682@topper.wku.edu](mailto:heidi.crocker682@topper.wku.edu)

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask him/her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign on the last page of this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. **Nature and Purpose of the Project:** The purpose of this qualitative study is to understand the perceptions of the benefits, risks, and alternatives of the clinical doctorate as an entry-level degree for pharmacists among professional leaders and policy makers.

2. **Explanation of Procedures:** A content questionnaire will be sent by email to all participants that have completed this informed consent form. This form will be returned to the investigator by email. Once the content questionnaire is received, the investigator will contact the participant to schedule the interview. The participant will have the choice of interview method: face-to-face, videoconference, or telephone. All participants will be ensured confidentiality of the interview transcripts. The interview session per participant is designed to not exceed one hour.

3. **Discomfort and Risks:** There are no physical, psychological, financial, or legal risks to you or any of the other participants associated with this study.

4. **Benefits:** The benefits gained from your participation may provide information about the decision-making process of Pharmacy moving to a doctorate as the entry-level into practice and expand the knowledge base for other health professions contemplating transitioning to the doctorate as an entry-level into practice.

WKU IRB#12-228  
Approved - 3/30/2012  
End Date - 8/30/2012  
Expedited  
Original - 3/30/2012

5. **Confidentiality:** Absolute confidentiality cannot be guaranteed; however, data will be

held in confidence to the extent permitted by law. All information collected may be reviewed by Dr. Miller and /or the University Human Studies Committee.

**6. Refusal/Withdrawal:**

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

*You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.*

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT  
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY  
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD

Paul Mooney, Human Protections Administrator

TELEPHONE: (270) 745-6733



WKU IRB#12-228  
Approved - 3/30/2012  
End Date - 8/30/2012  
Expedited  
Original - 3/30/2012



## APPENDIX G

### SUMMARY OUTLINE

## Appendix G

### Summary Outline

This summary outline will make it easier for the reader to view the entire chapter in holistic context. Patterns one through seventeen are presented in bold and the associated themes are presented in bold italic. Patterns sixteen and seventeen did not fit directly under any of the research questions and are addressed as additional findings.

#### **Research Question 1a**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate on:**

**a. health professions education?**

**First pattern: Historical accounts leading up to the ACPE mandate. There was a slow, incremental understanding that the practice of pharmacy both in hospitals and in community settings should be patient-care based. Because of the uncertainty and magnitude of the changes, this process was going to require comprehensive and explicit dialogue among all stakeholders.**

***Theme: The decision-making and implementation timeframe was a constructive process, but it was very controversial with a lot of anxiety about it.***

***Theme: Many respondents believe that pharmacists are the most underappreciated health profession. The pharmacist's contribution to healthcare is undervalued because they are invisible to the public.***

***Theme: There is still debate whether pharmacy education should focus on patient care or the product.***

**Second pattern: For this transition to be uniform and organized, it had to stem from the academic accreditation bodies and the educational profession.**

**Curricular changes in pharmacy education were necessary for successful conversion to the doctorate level.**

*Theme: During the transition, many schools revisited their clinical curriculum in making changes because those 7-10 years sustained a major overhaul in accreditation standards.*

*Theme: In order for the pharmacist to take on the responsibilities associated with drug management, the pharmacy education would need to be revamped.*

*Theme: Concern was expressed over which degree was appropriate.*

*Theme: A large group of individuals, these being academics, opposed the doctorate as the entry-level degree into pharmacy.*

*Theme: The biggest curricular change was the addition of the one year of experiential work.*

**Third pattern: When converting to the Doctor of Pharmacy degree program, many institutions experienced internal resistance related to universities and their educational programs.**

*Theme: The state universities, in many cases, were much more research focused and research intensive, with NIH or FDA funding, and that is viewed positively across the country and internationally.*

*Theme: Schools that established the educational model of the Pharm.D./medical school had an easier time with the transition.*

*Theme: It was a struggle to create another position called clinical faculty. This position was necessary because of the inclusion of the experiential component that was added to the curriculum.*

*Theme: Originally, a shortage of clinical faculty in the Pharm.D. programs*

*existed. A major challenge for the programs was obtaining additional clinical faculty.*

*Theme: An issue faced by the schools is how to treat these new academics in terms of getting them promoted.*

*Theme: Within the schools and colleges of pharmacy, the biggest opposition was the basic science faculty.*

**Fourth pattern: Institutions making the conversion to the Doctor of Pharmacy degree were met with external resistance with respect to the practice of pharmacy.**

*Theme: There was opposition within the profession as well as that within universities.*

*Theme: Many of the people who held a Bachelor of Science degree (B.S.) in pharmacy as the main credential for a lifelong practice as a registered pharmacist were facing a choice.*

*Theme: The B.S. pharmacists said “wait a minute”; soon people will be asking for a Pharm.D. and we are not going to be considered for some positions.*

*Theme: The ability for pharmacy practice to evolve is dependent on the opportunities that exist in community and hospital practice settings. The responsibilities and duties of pharmacists are expanding in the work-place environment, but very slowly.*

*Theme: The educational outcomes of the pharmacy curriculum limit the roles and responsibilities of pharmacists in practice.*

*Theme: The respondents unanimously agreed that the primary external opposition came from the chain drugstores and owners of regional chains.*

**Fifth pattern: Recognition that the impact on students and the entire**

educational experience was an important factor in both the decision and implementation of the professional doctorate in pharmacy.

*Theme: A student can't go through this program without going full time and having a structured curriculum.*

*Theme: There is a sense that to differentiate themselves now, new graduates have to go through residencies or obtain certifications.*

*Theme: The type of student attracted to pharmacy is part of the problem.*

**Sixth pattern:** The changes in pharmacy education curriculum as related to academia have been an evolution, not a revolution.

*Theme: The ACPE developed the add-on Pharm.D. to allow B.S. pharmacists to upgrade their credentials.*

*Theme: The complexity of drug interactions was rising and it is necessary to educate pharmacists to reflect this with skills in-patient counseling.*

*Theme: The changes wrought by the new Pharm.D. required extensive debate about and changes in pharmacy curriculum and instruction.*

*Theme: The Commission to Implement Change did not approach this conversation from the standpoint of whose material was going to be deleted. It was far more concerned with how the program could obtain what was needed or a curriculum to reflect the nature of the practice of the profession, and to do this in a reasonable period of time.*

*Theme: The combination of new requirements in content and knowledge for the Pharm.D. as well as necessity of background understanding of science has led some schools to institute a pre-pharmacy program requirement of up to three years.*

*Theme: One result of institutions being required to bring in additional qualified*

*people to implement the revised programs has been a rise in tuition.*

*Theme: Not one grand scheme, template, or module exists to follow. A formal, strategic plan was not developed to assist institutions through this paramount change process.*

#### **Research Question 1b**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

**b. the delivery of service?**

**Seventh pattern: The success of the transition from product-based to patient-based pharmaceutical care is inconsistent throughout the U.S. healthcare system.**

*Theme: With the introduction of the Pharm.D., the role for the new clinically trained pharmacist expanded rapidly in hospital settings.*

*Theme: The advancements in the delivery of services and the scope of practice are dependent on geographic location.*

*Theme: State regulations regarding the scope of practice of pharmacy are widely varied throughout the country and have a direct impact on the delivery of services.*

*Theme: There appears to be a relationship between licensure, state governments, and the protection of salaries.*

*Theme: One issue that makes pharmacy unique is that it is the only profession in which two sets of licenses are required: the practitioner who has the license and the space or facility in which the pharmacist works.*

**Eighth pattern: Finances play a major role in changing pharmaceutical**

practice.

*Theme: A primary player is the pharmaceutical industry.*

*Theme: The business model of the chain drugstores limits the roles and responsibilities of pharmacists in practice.*

*Theme: In the attempt to modernize the pharmacy practice from a product-oriented to a patient-oriented profession, one concern was how pharmacists were going to get paid for the advanced services.*

*Theme: A limiting factor is that an organized system for compensation for services has not been established.*

*Theme: The current third-party reimbursement model does not provide incentives for pharmaceutical care.*

#### **Research Question 1c**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

**c. the interdisciplinary relationship of practicing physicians?**

**Ninth pattern: Professionals in the U.S. healthcare system are strongly resistant to change and seek evidence-based research that a change is necessary.**

**With respect to how the other fields responded to the changes happening in pharmacy, evidence is growing that an interprofessional, team-based approach to patient care is the best-practice model.**

*Theme: The pharmacy profession did not have a strategic plan to inform the other stakeholders; however, there is a slow but continual acceptance of the abilities of the pharmacist.*

*Theme: There is a trend in the healthcare delivery system toward a*

*collaborative care model.*

*Theme: Many respondents have confidence that physicians will rely more and more on the information from the pharmacist.*

*Theme: The changing landscape in healthcare required a team-based approach and the pharmacist was the best professional to manage the drug therapy.*

**Tenth pattern: Most patients need drug therapy and many physicians, nurses, and other health professionals are recognizing that there is somebody on the team who has expertise about medication therapy and not diagnosis. Understanding the complementary competencies and skill sets of each individual on the interdisciplinary team needs to occur at the educational level.**

*Theme: Pharmacists lack the skills in physical assessment that are necessary for patient diagnosis but are experts on the drug management of disease.*

*Theme: One way to change the face of a profession is to educate health professionals together, in a collaborative environment.*

*Theme: There are more opportunities for the disciplines to be educated together.*

#### **Research Question 1d**

**What are the benefits, risks, and alternatives of the elevation of requirements to an entry-level doctorate degree on:**

**d. societal and economic landscape of the health care industry (cost-benefit)?**

**Eleventh pattern: The Pharm.D. has resulted in a gradual change in the practice and professionalization of pharmacy and the concomitant views of society.**

*Theme: One of the underlying reasons for the transition to the Pharm.D. was that pharmacists wanted more responsibility, but there is a difference between*



*increased responsibility and autonomy.*

*Theme: Pharmaceutical care services cannot be forced upon the public, but take a slow, steady change in perceptions and expectations of individual patients.*

*Theme: When opportunities are present for pharmacists to practice to their fullest potential, society will benefit as a whole.*

*Theme: Opportunities to practice pharmaceutical care are still in their infancy.*

*Theme: The pharmacy profession, as a whole, has not been proactive in public relations. The health literacy of an individual seemed to be directly related to personal interaction with a pharmacist.*

## **Research Question 2**

**What is the transferability of an entry-level clinical doctorate related to professional opportunities?**

**Twelfth pattern: The Doctor of Pharmacy is well prepared for a larger area of professional practice and related careers, such as the pharmaceutical industry and prescription development.**

*Theme: Opportunities are expanding in hospital and community settings.*

*Theme: Pharmacy is a huge industry and Pharm.D.s are highly sought today throughout the field.*

**Thirteenth pattern: There were external forces behind the progression of the clinical doctorate in pharmacy and other professions that are contemplating the transition may want to address these factors.**

*Theme: The respondents perceive this transition to be successful in pharmacy because all stakeholders were involved.*

*Theme: The respondents agreed that other professions might want to take time*

*to learn this process, because this process has worked well for pharmacy.*

*Theme: If the various stakeholders in the educational institutions successfully implement change in the educational requirements, the graduates of the Pharm.D. programs will have a ripple effect through the rest of society due to their upgraded capabilities and professional practice.*

*Theme: It is important for a profession to articulate clearly what the difference will be when the professional doctorate program is implemented and how that will translate to better outcomes for patients.*

*Theme: The intention of the profession to transition to the practicing doctorate should be to establish a role as part of a collaborative team with other healthcare professionals, not increase the professional autonomy.*

**Fourteenth pattern:** The biggest surprise from the establishment of the Pharm.D. as the sole entry-level degree has been the unexpected rise in pharmacy schools.

*Theme: During the transition period, leaders thought that this educational change would decrease the number of applicants. This turned out not to be true.*

*Theme: In addition to the increased number of schools, the class size has grown as well.*

*Theme: There was the perception of uncertainty regarding the quality of some of the new schools and new programs within existing schools that have been started in the past 20 years.*

*Theme: The largest increase of new programs has been in private schools, many without the established culture of doctoral or health professions education.*

**Fifteenth pattern:** The conversation about redefining the pharmacy

profession is happening on a global scale.

*Theme: Understanding the culture of a country and how that shapes the response to a major change effort is vital to professional change.*

*Theme: On a global scale, the Pharm.D. is not equivalent around the world. The ACPE has opened several international initiatives and dialogue opportunities.*

#### **Additional Findings**

**Sixteenth pattern: The Pharm.D. must rely on the pharmacy technician in the dispensing role in order to have time for patient care.**

*TTheme: The role of the pharmacy technician has created huge internal conflict for many years, and this continues to this day.*

*Theme: The profession needs to get technicians licensed, but the idea of accomplishing this in this country will require a daunting political battle.*

**Seventeenth pattern: Location, age, and patient compliance affect access to and quality of healthcare.**

*Theme: One of the surprises has been the rather quick movement of pharmacists out of the inner cities.*

*Theme: One out of every five Medicare patients ends up in the hospital because they do not take their medications correctly.*

