Copy Authorization

In presenting this thesis (or project) in patient fulfillment of the requirement for an advanced degree at University of Houston, I agree that the Library shall make it freely available for inspection. I further state that permission for extensive copying of my thesis (or project) for scholarly purpose may be granted by my major advisor, the Dean of Graduate studies, Dean of my academic division, or by the University Librarian. It is understood that any copying or publication of this thesis (or project) for financial gain shall not be allowed without my written permission.

Signed: Signature on File

Mallory Gessner-Wharton

Dated: May 6, 2013

# Pharmacists' perception of non-traditional pharmacy practice residencies

by

Mallory Gessner-Wharton, PharmD

A project submitted in partial fulfillment of

the requirement for the degree of

MASTER OF SCIENCE

IN

PHARMACY

(PHARMACY ADMINISTRATION)

Non-Thesis Project

University of Houston

College of Pharmacy

April 2013

To the Faculty of the University of Houston, College of Pharmacy:

The members of the committee appointed to examine the project of Mallory Gessner-Wharton find it satisfactory and recommend that it be accepted on May 10, 2013.

Signature on File

Committee Chair, Santhi Masilamani, PharmD, CDE, MBA

Signature on File

Committee Member, Kevin Garey, Pharm.D., M.S.

Signature on File

Committee Member, Brian Fase, PharmD, MS, BCPS

Acknowledgements

Santhi Masilamani - Master's Thesis Advisor and University of Houston Clinical Assistant Professor

Brian Fase – Committee Member and MEDVAMC HSPA Residency Program Coordinator

Kevin Garey – Committee Member and University of Houston Associate Professor

Tom Huston – MEDVAMC HSPA Residency Program Director

Veronica Franklin – MEDVAMC Chief of Pharmacy

Cheryl Mitchell – MEDVAMC Assistant Chief of Pharmacy

Richard Cadle – MEDVAMC Outpatient Clinical Pharmacy Manager

Nicole McMaster-Baxter – MEDVAMC Inpatient Clinical Pharmacy Manager

**Introduction:** American College of Clinical Pharmacists (ACCP) and American Society of Health-System Pharmacists (ASHP) have proposed that all pharmacists entering direct patient care roles be residency trained by 2015. Recently, the Veteran's Health Administration (VHA) has stated that all VA pharmacists are now considered to be clinical. Along with this promotion, VHA is expecting all pharmacists to take on clinical duties traditionally reserved for residency trained pharmacists. Without additional training, staff pharmacists may not have the skills for the new job requirements. One method to bridge this gap is through non-traditional residencies offered to currently employed pharmacists. An evaluation of non-traditional residency structure, barriers and incentives to potential applications has not been published previously. This information is needed for program directors to understand the needs of this applicant pool and develop these programs to fit their needs to encourage a wide variety of applicants. The primary objective of this study was to evaluate the pharmacists' perception of non-traditional pharmacy practice residencies within Michael E. DeBakey VA Medical Center (MEDVAMC) and the Texas Society of Health-System Pharmacists (TSHP).

**Methods:** A voluntary attitude survey of pharmacists on their perception of non-traditional pharmacy practice residencies using a Likert scale was distributed to MEDVAMC and TSHP Pharmacists. Participants were questioned about their knowledge on non-traditional residencies, level of post-graduate training, necessary components of a non-traditional residency and training equivalence to traditional pharmacy practice residencies.

**Results:** The survey was distributed to 1131 pharmacists in the state of Texas and 156 surveys were completed for a response rate of 13.8%. Overall, 50% of survey participants

believed that a non-traditional pharmacy practice residency is equal training to a traditional pharmacy practice residency. The survey data indicated that the ideal structure of a non-traditional pharmacy practice residency would be one to two years in length, not change the employees' salary, acquire ASHP accreditation and not require continued employment after residency graduation.

**Conclusion:** Non-traditional pharmacy practice residencies are seen as equal training to traditional pharmacy practice residencies. When developing a non-traditional pharmacy practice residency program, the program director should consider incorporating the important aspects to potential non-traditional residency candidates including continuation of the pharmacist's current salary, completing the residency in the shortest time frame possible and ASHP accreditation.

## Table of Contents

## List of Tables



## List of Figures

## List of Acronyms

ACCP – American College of Clinical Pharmacists

ASHP – American Society of Health-System Pharmacists

CE – Continuing Education

IV to PO – Intravenous to oral

MEDVAMC – Michael E. DeBakey VA Medical Center

PGY-1 – Post-Graduate Year 1

PPMI – Pharmacy Practice Model Initiative

TSHP – Texas Society of Health-System Pharmacists

VA – Veterans Affairs

VHA – Veterans Health Administration

## Introduction

The American College of Clinical Pharmacists (ACCP) and American Society of Health System Pharmacists (ASHP) have proposed that all pharmacists entering direct patient care roles, be residency trained by 2015 (Smith, 2010). Currently, there are not enough residency programs or residency trained pharmacists to meet these goals. In 2012, 2,160 PGY-1 Pharmacy Practice Residencies entered the Match with 3,706 applicants participating in the Match. In 2012, 39% of PGY-1 residency applicants did not match with a residency program (National Matching Services Inc., 2012) (Figure 1). The VA needs a way to increase the number of clinically trained pharmacists currently working for the VA to comply with the new ASHP and ACCP proposals.

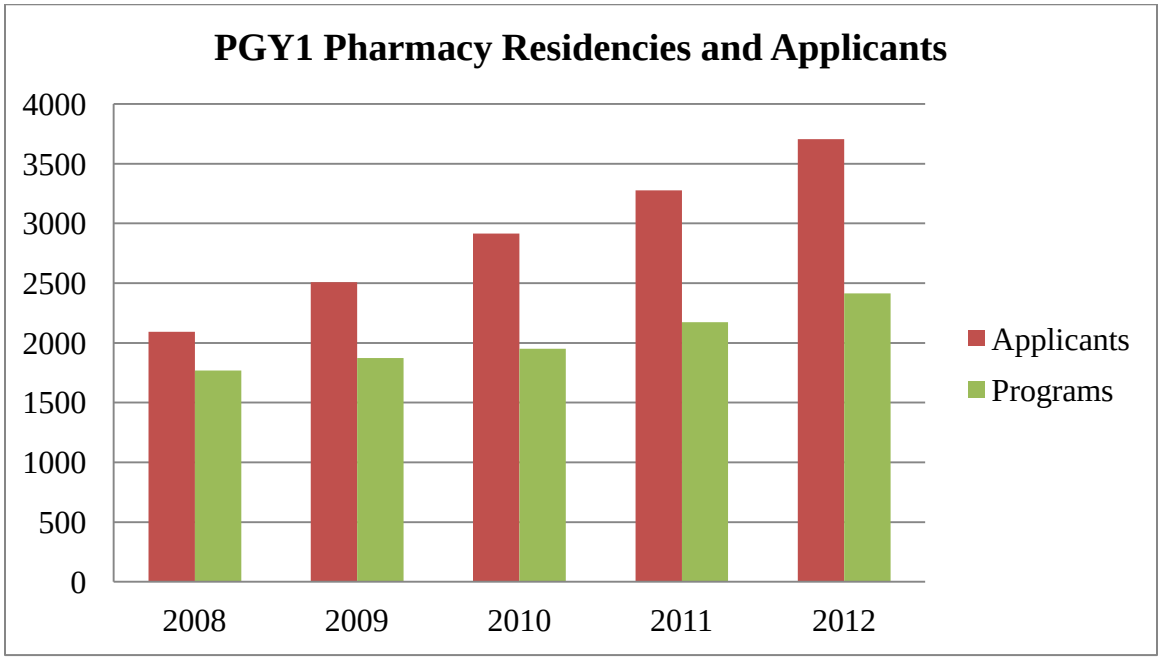

Figure 1: PGY1 Pharmacy Residencies and Applicants

Recently, the Veteran's Health Administration (VHA) stated all VA pharmacists are now considered to be clinical pharmacists (VA Handbook 5005/55), which includes the expectation to spend greater than 25% of their time performing clinical duties. At the

Michael E. DeBakey VA Medical Center (MEDVAMC) 0% of staff pharmacists have completed a pharmacy residency. Currently, MEDVAMC staff pharmacists' clinical responsibilities include calling physicians on potential dosing errors or drug interactions through verification of medication orders. MEDVAMC plans to increase clinical responsibilities to PO to IV conversions, inpatient anticoagulation management and rounding with medical teams. Without additional training, staff pharmacists may not have the skills to meet the new job requirements. The VA needs a method to increase the number of residency trained pharmacists to comply with the ASHP and ACCP proposals and new job requirements. This can be accomplished through the use of non-traditional pharmacy practice residencies.

One recent initiative to expand the clinical roles of pharmacists throughout the country is the ASHP Pharmacy Practice Model Initiative (PPMI) (Pharmacy Practice Model Initiative, Executive Summary, 2011). Per ASHP the PPMI objectives will:

1. Create a Framework - Create a framework for a pharmacy practice model that ensures provision of safe, effective, efficient, accountable, and evidence-based care for all hospital/health system patients;

2. Determine Services - Determine patient care-related services that should be consistently provided by departments of pharmacy in hospitals and health systems and increase demand for pharmacy services by patients/caregivers, healthcare professionals, healthcare executives, and payers;

3. Identify Emerging Technologies - Identify the available technologies to support implementation of the practice model, and identify emerging technologies that could impact the practice model;

4. Develop a Template - Support the optimal utilization and deployment of hospital and health-system pharmacy resources through development of a template for a practice model which is operational, practical, and measurable; and

5. Implement Change - Identify specific actions pharmacy leaders and staff should take to implement practice model change including determination of the necessary staff (pharmacy leaders, pharmacists, and technicians) skills and competencies required to implement this model.

The PPMI objectives are useful to help pharmacy managers increase clinical responsibilities for their pharmacists and ensure their staff is working at the highest potential that their scope of practice will allow. Examples are delegating distributive roles to pharmacy technicians, expand pharmacy services to all areas of the hospital, pharmacists providing discharge counseling for patients, pharmacists providing medication reconciliation at all transitions and have every medical and surgical team round with a pharmacist.

Post-graduate training for pharmacists began with hospital internships in the 1930's. Residencies grew from these internships which led to the creation of an accreditation program in 1962 by ASHP. Traditional pharmacy residency training begins with a one year PGY-1 general pharmacy practice residency and is continuously on rotations. The resident may then choose to continue their post-graduate training with a

second year PGY-2 residency in a specialty area such as critical care, infectious disease, oncology, ambulatory care or solid organ transplant.

An option for pharmacists who did not complete a residency immediately after graduation is a non-traditional pharmacy practice residency. A non-traditional residency is generally an extended general pharmacy practice residency to be complete over two to three years. The resident alternates between residency rotations and their current pharmacist position throughout the residency. The resident is paid a full pharmacist salary and benefits while traditional pharmacy residents are paid approximately 50% of pharmacist pay. For various reasons, the decrease in pay is a limiting factor for many pharmacists wishing to pursue residency training. Nationwide, the VA has three non-traditional residency programs. To increase the number of residency trained pharmacists nationwide in the VA, a non-traditional residency program would be a natural choice as the pharmacists would continue their current position in non-rotation months and increase their career development. This would also keep many pharmacists in the current work schedule and decrease the amount of new hires needed to staff while current pharmacists leave to complete a residency.

The perceptions and ideal structure of non-traditional pharmacy practice residencies needed to be evaluated prior to the development of additional programs to adequately assess the pros and cons of non-traditional pharmacy practice residencies and to ensure these residencies are seen as equal training to traditional residencies. If they are not seen as equal training to traditional residencies there would be limited benefit to starting the program without evaluating why and what would need to change to ensure they are equal training. This would be due to the limited advancement potential by those

who would complete the residency. Managers and clinical pharmacists who would assist with the hiring process may not give them an interview if they did not feel their training was adequate. The ideal structure of the residency has not been evaluated prior in previous literature. The structure, barriers and incentives needed to be evaluated by potential applicants so program directors understand the needs of this applicant pool and develop these programs to fit their needs to encourage a wide variety of applicants.

The primary objective of this study is to evaluate the pharmacists' perception of non-traditional pharmacy practice residencies within MEDVAMC and the Texas Society of Health-System (TSHP) Pharmacists.

## Methods

**Study Design.** A perception survey was developed to gather data to describe the ideal non-traditional pharmacy practice residency and pharmacists' perceptions of non-traditional pharmacy practice residencies. This survey was made available in electronic and paper formats. The electronic survey was designed using Qualtrics (Qualtrics Labs, Inc, Provo, UT) and the paper survey was designed using Microsoft Word 2007 (Microsoft Office, Redmond, WA). The electronic survey was emailed to all potential survey respondents within MEDVAMC and TSHP. Paper surveys were distributed at staff meetings at MEDVAMC. Email addresses were obtained from the MEDVAMC pharmacy service listserv and the TSHP Director. Pharmacy technician members of TSHP and employees of MEDVAMC were excluded. The electronic survey was distributed on March 1, 2013 to MEDVAMC and TSHP emails. MEDVAMC employees were also invited to participate in the survey on March 1, 2013 at staff meetings. A second reminder email was sent to MEDVAMC and TSHP emails on March 11, 2013. On March 15, 2013 the survey was closed for submissions. The electronic survey tool supported data collection, analysis and had data-export abilities. The questions were designed to obtain information on participant demographics, preferred length of non-traditional residency, potential barriers to completing residency, potential incentives to completing residency, suggested required rotations for a non-traditional residency, should the resident be required to sign a contract for continued employment after residency graduation, potential residents opinion of a change in salary and if ASHP Accreditation is necessary for a non-traditional pharmacy residency (Appendix A). The survey used branching logic to ask non-residency trained pharmacists how likely they would be to

complete a non-traditional pharmacy practice residency based on specific criteria of the residency such as change in salary and length of the residency. No identifiable information, such as name or email address was collected. The survey was validated for face and content validity by 9 pharmacists employed at MEDVAMC. All suggestions were evaluated and changes were incorporated into the final version, as appropriate.

Prior to starting the survey, a short description of non-traditional pharmacy practice residencies was displayed to ensure all respondents knew the basic principles of a non-traditional pharmacy practice residency. The first part of the survey was designed to gather demographic information regarding years in practice, practice area, experience as a residency program director, knowledge of non-traditional pharmacy practice residencies and post-graduate training obtained. The following section was posed to all respondents who had not completed a pharmacy practice residency. It gathered information such as if they had considered completing a traditional pharmacy practice residency or a non-traditional pharmacy practice residency previously, the barriers and incentives to complete a residency, how likely they would be to complete a non-traditional residency: based on the length, if a promotion was not guaranteed, if the residency required a decrease in salary, if they were required to work for that institution for a specified amount of time after residency and if it was not ASHP Accredited. To evaluate their interest in a non-traditional pharmacy practice resident based on the factors above, a 5-point Likert scale was used with the following choices: “Very Unlikely,” “Unlikely,” “Undecided,” “Likely,” and “Very Likely.” The final section asked all respondents if they felt a non-traditional pharmacy practice residency would be equivalent training to a traditional pharmacy practice residency, what rotations should be

required, what longitudinal experiences should be required and how long a non-traditional resident should be required to work for the institution after residency graduation.

Prior to creating the survey a review of the literature was conducted to gather information on the structure of non-traditional pharmacy practice residency programs. An internet search was also conducted to evaluate non-traditional pharmacy practice residency program structure. VA non-traditional residency programs were identified through the VA Clinical Pharmacist Listserv. Program directors were contacted to gather more in depth knowledge of their program than a web site can provide. Questions posed to current non-traditional pharmacy practice residency programs included length of the program, if the salary of the resident decreased during residency, how the rotations were scheduled with their current position, if the resident was required to continue working for that institution after residency graduation, if the non-traditional residency was ASHP accredited, the required rotations, required longitudinal experiences, use of the National Match Service, and the requirement of a CE presentation. The directors were also asked if they use any different teaching methods for their non-traditional residents compared to their traditional residents.

**Data Analysis.** Descriptive statistics were used to describe the survey participants' demographics and survey responses. Chi square test and Fisher exact test was used to evaluate nominal data. Data was analyzed using Microsoft Office Excel 2007 (Microsoft Office, Redmond, WA). This study was approved by the Michael E. DeBakey VA Medical Center, Baylor College of Medicine and University of Houston Investigational Review Boards.

## Results

The electronic survey was emailed to 1037 TSHP Pharmacist members and 115 MEDVAMC Pharmacists. A total of 16 emails were returned as undeliverable and therefore excluded from the analysis. A total of 1131 requests to complete the voluntary survey were distributed by email. Paper surveys were distributed at 3 staff meetings at MEDVAMC to 40 pharmacists of the 115 MEDVAMC Pharmacists. These pharmacists were also informed that an email would be sent to them if they preferred to complete the survey electronically. 152 surveys were completed online and 4 surveys were completed on paper for a total of 156 responses and a response rate of 13.8%.

**Demographics.** Table 1 includes the respondents' demographic information including practice setting and years in practice. Table 2 documents the advanced training pursued after pharmacy degree of the survey respondents. Overall, the most common practice setting was inpatient (38%), followed by administration (25%) and clinical inpatient (15%). Most respondents had practiced for greater than 21 years (39%). The most common advanced training responses were tied between no advanced training completed and PGY1 Residency (34%). Prior to this survey 46% of respondents had heard of non-traditional pharmacy practice residencies.

| Variable | All Respondents | Pharmacists with Residency Training | Pharmacists without Residency Training |
|---|---|---|---|
| Years in Practice (n=153) | | | |
| 0-3 Years | 32 (20.9%) | 19 (12.5%) | 13 (8.5%) |
| 4-5 Years | 16 (10.4%) | 10 (6.6%) | 6 (4%) |
| 6-10 Years | 24 (15.7%) | 14 (9.2%) | 10 (6.6%) |
| 10-20 Years | 22 (14.3%) | 10 (6.6%) | 12 (7.9%) |
| > 21 Years | 59 (38.6%) | 16 (10.5%) | 42 (27.6%) |
| Practice Setting (n=150) | | | |
| Inpatient | 58 (38%) | 17 (11%) | 41 (27%) |
| Outpatient | 17 (11%) | 4 (3%) | 13 (9%) |
| Clinical Inpatient | 22 (15%) | 21 (14%) | 1 (1%) |
| Clinical Outpatient | 16 (11%) | 8 (5%) | 7 (5%) |
| Administration | 37 (25%) | 19 (13%) | 18 (12%) |
| Heard of NT Res (n=156) | 71 (46%) | 39 (56%) | 31 (37%) |

Table 1: Survey Respondents Demographics

| Advanced Training (n=156) | |
|---|---|
| None | 53 (34%) |
| PGY1 Residency | 53 (34%) |
| PGY2 Residency | 25 (16%) |
| Board Certification | 20 (13%) |
| MBA | 14 (9%) |
| Other Advanced Degree | 12 (8%) |
| PGY1/PGY2/MS Residency | 11 (7%) |
| Fellowship | 1 (1%) |
| Residency Director (n=156) | 18 (12%) |

Table 2: Survey Respondents Advanced Training Experience

**Perception of Non-Traditional Pharmacy Practice Residencies.** Overall, 50% of survey participants believed that a non-traditional pharmacy practice residency is equal training to a traditional pharmacy practice residency. Approximately 31% of participants felt a traditional residency is more or much more training than a non-traditional residency, while 18% felt a non-traditional residency is more or much more training than a traditional residency. When the opinion of pharmacists are compared based on years of

practice if non-traditional residency training is equal to traditional training the highest response was non-traditional residency training is equal to traditional residency training across all years in practice (Figure 2).

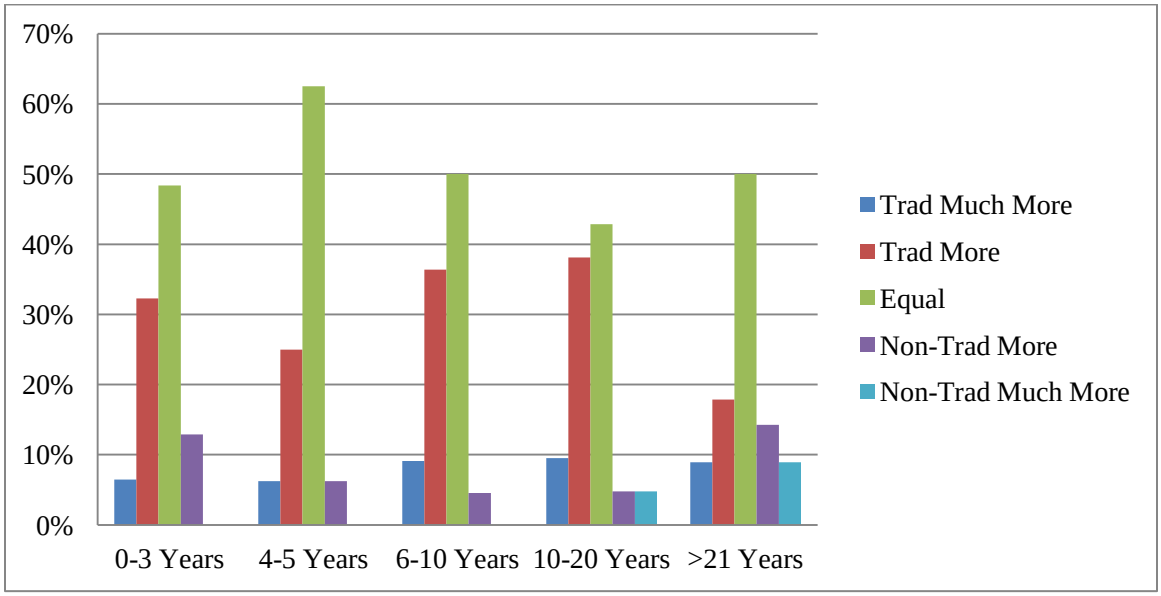


Figure 2: Non-Traditional Residency versus Traditional Residency: Years in Practice

When the opinion of residency trained pharmacists and non-residency trained pharmacists are compared if non-traditional residency training is equal to traditional residency training, a majority of both groups felt they are equal (Figure 3), but the residency trained pharmacists had a statistically significant increase in the number of pharmacists who felt traditional residencies are more training than non-traditional residencies ($p=0.03$).

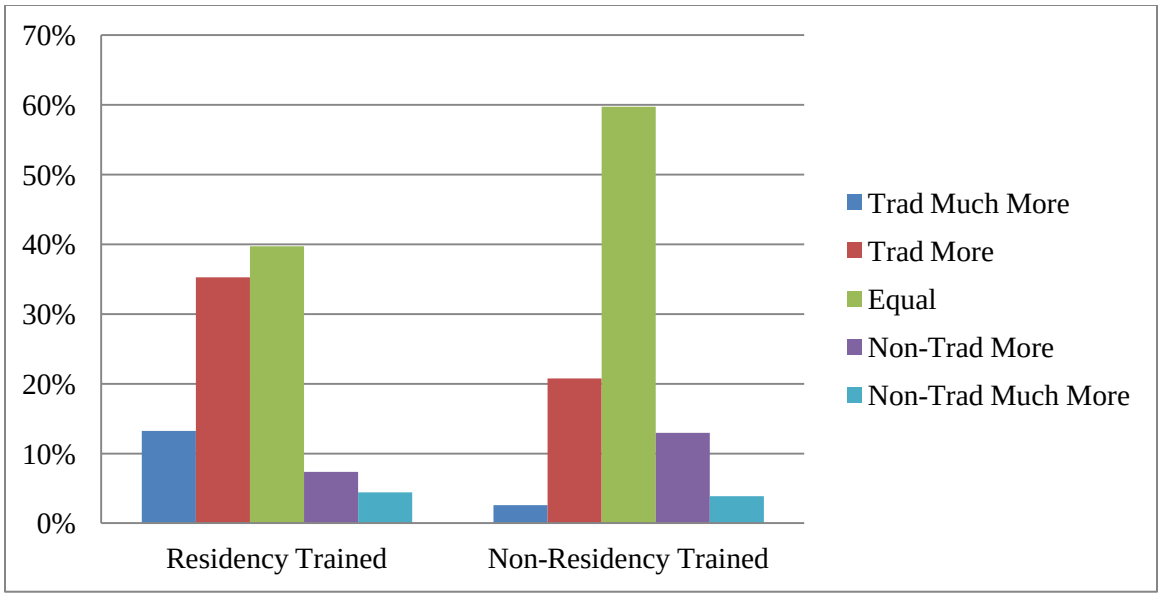


Figure 3: Non-Traditional Residency versus Traditional Residency: Residency Training

When the opinion of pharmacists are compared based on practice area, all practice areas felt non-traditional residencies are equal training to traditional residency except for clinical inpatient pharmacists who felt traditional residencies are more training that non-traditional residencies (Figure 4).

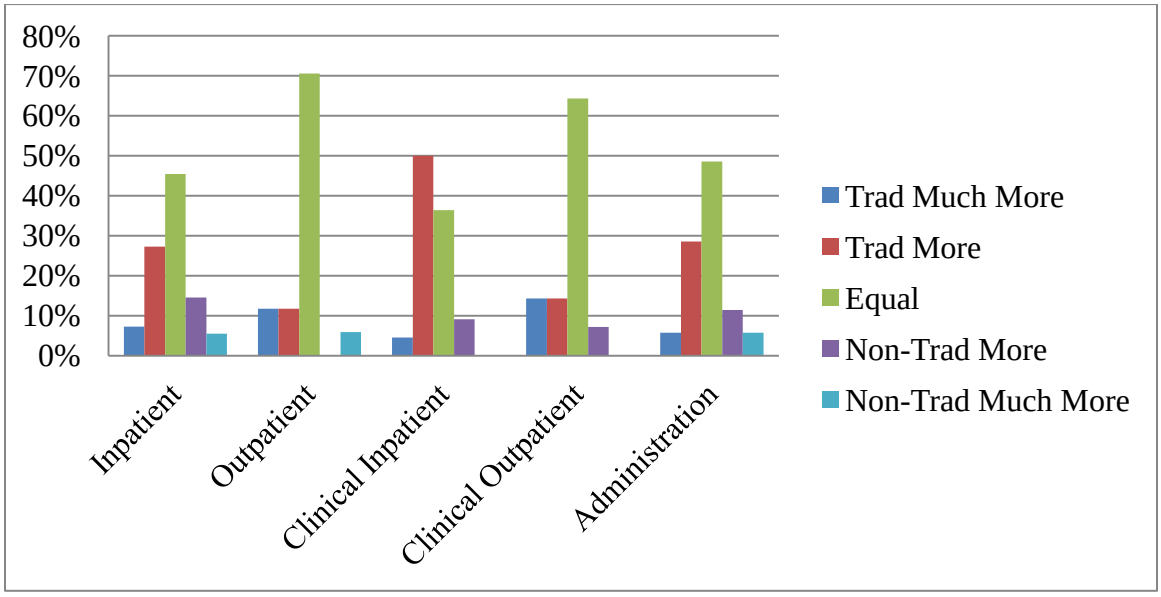


Figure 4: Non-Traditional Residency versus Traditional Residency: Practice Area

**Non-Traditional Pharmacy Practice Residency Structure per All Respondents.** Respondents felt that the following rotations should be mandatory for non-traditional pharmacy practice residencies: internal medicine (136, 87%), infectious disease (123, 79%), critical care (114, 73%), ambulatory care (105, 67%), and practice management (101, 65%) (Figure 5).

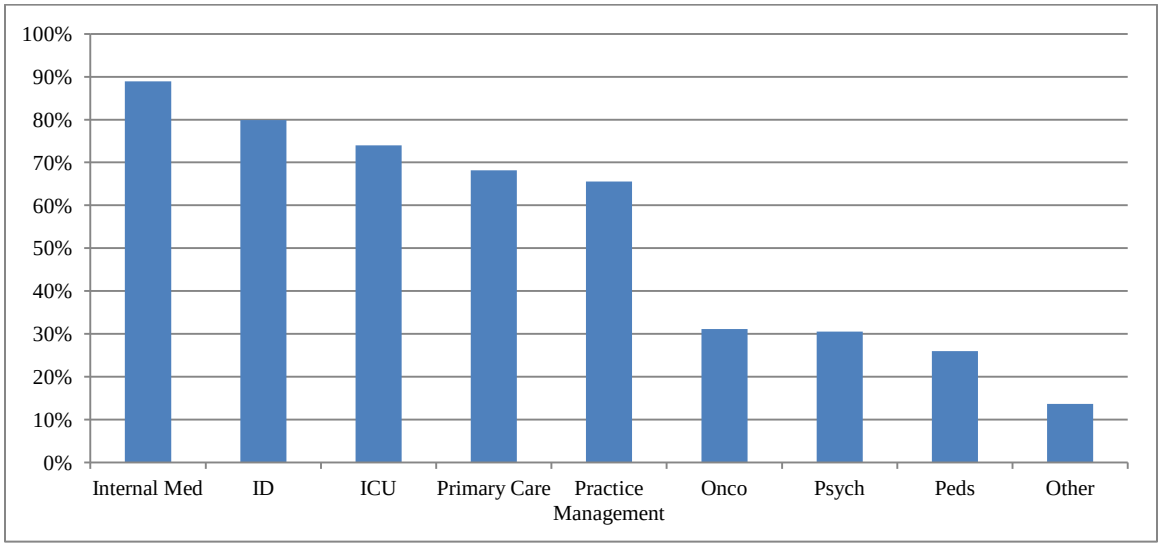


Figure 5: Mandatory Non-Traditional Residency Rotations

Several respondents commented that they rotations should be tailored to fit the training the resident needs depending on their past employment experiences. Based on the survey responses, the required longitudinal experiences for a non-traditional pharmacy practice residency should include: research project (104, 67%), non-formulary medication review (88, 56%), practice management (87, 56%) and ambulatory care clinic (84, 54%). Staffing was chosen least frequently as a longitudinal experience (71, 46%) (Figure 6).

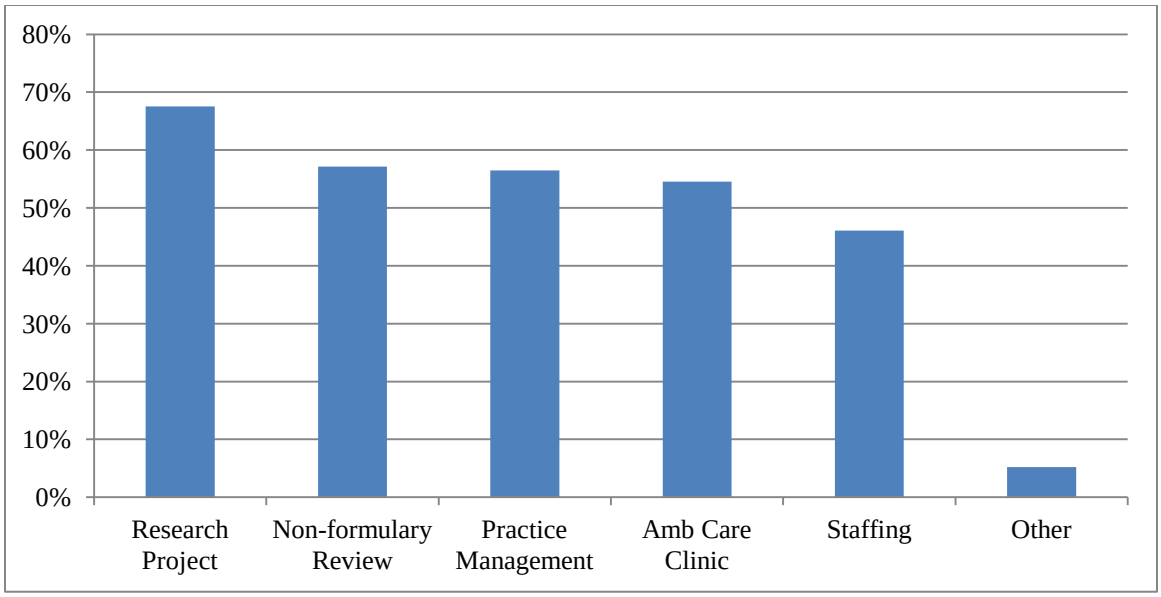


Figure 6: Mandatory Longitudinal Non-Traditional Residency Rotations

The most popular ideal length of a non-traditional pharmacy practice residency was 24 months (60, 38%) and 12 months as the second most popular choice (46, 29%) (Figure 7).

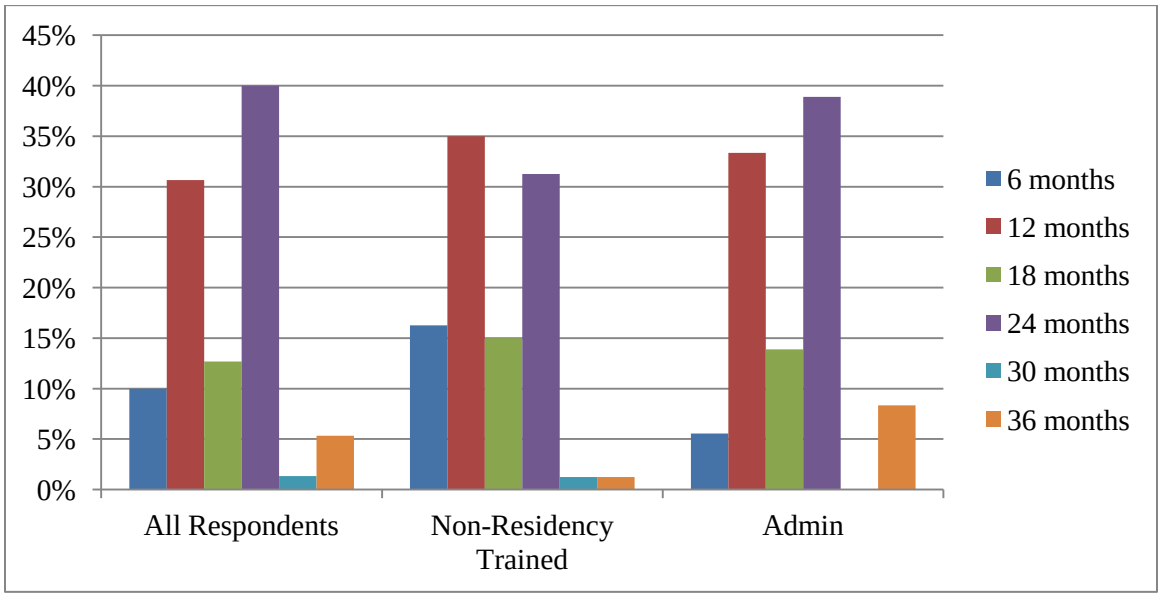


Figure 7: Ideal Length of a Non-Traditional Pharmacy Practice Residency

When asked if the resident should be required to sign a contract for continued employment after graduation the majority stated the resident should not be required to sign a contract (68, 44%) (Figure 8).

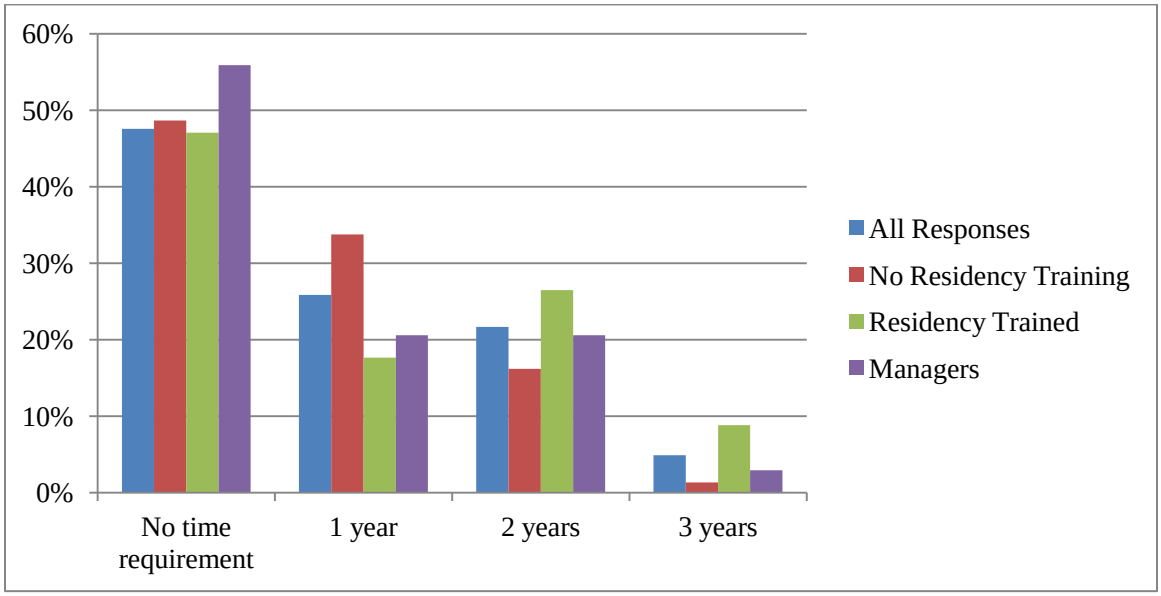


Figure 8: Required Employment Time Period After Residency Graduation

**Non-Traditional Pharmacy Practice Residency Structure Preferences of Pharmacists without Residency Training.** Prior to completing this survey 41% of the respondents without residency training had considered completing a traditional residency and 40% had considered complete a non-traditional pharmacy practice residency. When asked how likely they would be to complete a non-traditional residency if it was one, two or three years in length the response of "likely" or "very likely" was 44% if it was one year, 29% if it was two years and 11% if it was three years in length (Figure 9).

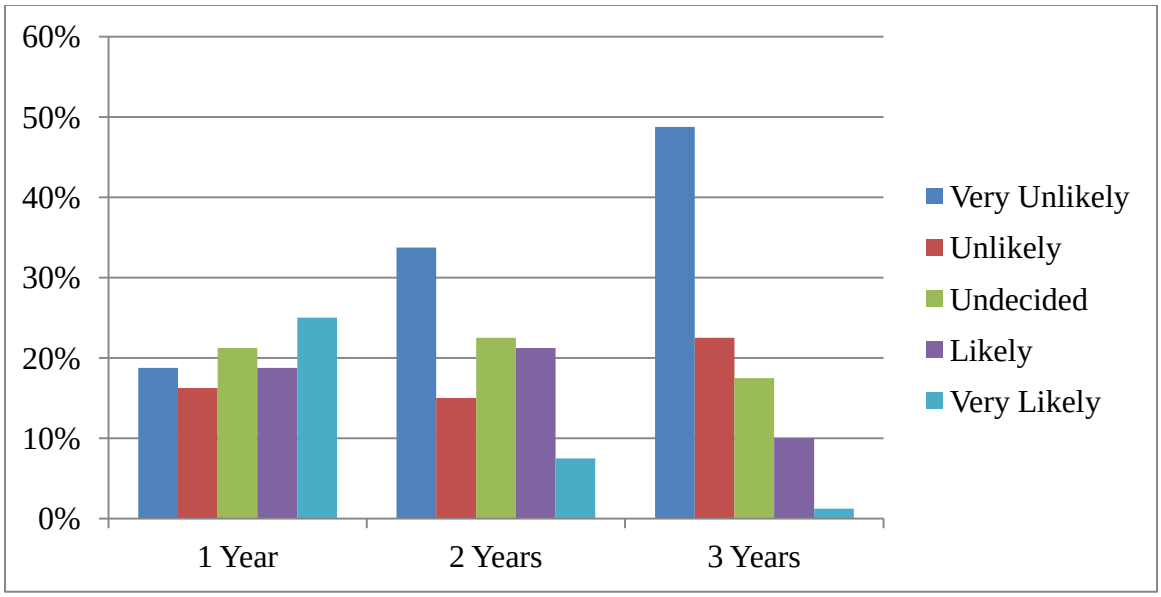

Figure 9: Likeliness to Complete a Non-Traditional Residency Based on Length (n=83)

The non-residency trained pharmacists identified the following barriers to completing a non-traditional pharmacy practice residency: lower salary (58%), no guaranteed promotion (49%), time commitment (47%), other institutions may not see non-traditional residencies as equal training to traditional residencies (45%), completion of a research project (25%), stamina necessary to complete a residency (17%) and additional responsibilities after completion of a residency (5%). Additional barriers described included out of school for too long, residency training is not needed, unsure of value attained after completion of a non-traditional residency and length of the program. The non-residency trained pharmacists identified the following incentives to completing a non-traditional pharmacy practice residency: increase knowledge (76%), work with other health professionals (54%), increase in clinical duties (43%), improve precepting skills (42%), attend rounds with medical teams (41%), improve presenting skills (40%), decrease distributive duties (29%). Additional incentives described included improved credentials, increased patient management skills, increase research skills and the ability

to continue with current position while obtaining additional training. When questioned on the respondents' willingness to complete a residency based on their salary, the response of "likely" or "very likely" was 54% if there was no change in salary, 19% if they would receive 75% of their current salary and 3% if they would receive 50% of their current salary (Figure 10).

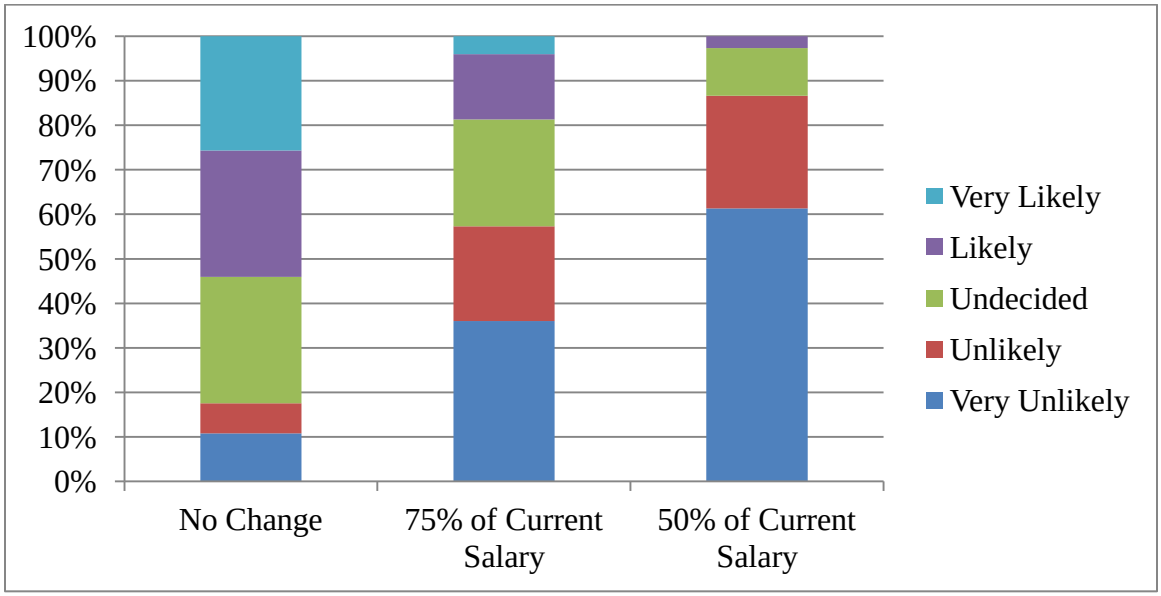


Figure 10: Likeliness to Complete a Non-Traditional Residency Based on Salary (n=83)

The survey respondents preferred 2 month blocks (42%) for rotations, the second highest response was 1 month rotation blocks (27%) (Figure 11).

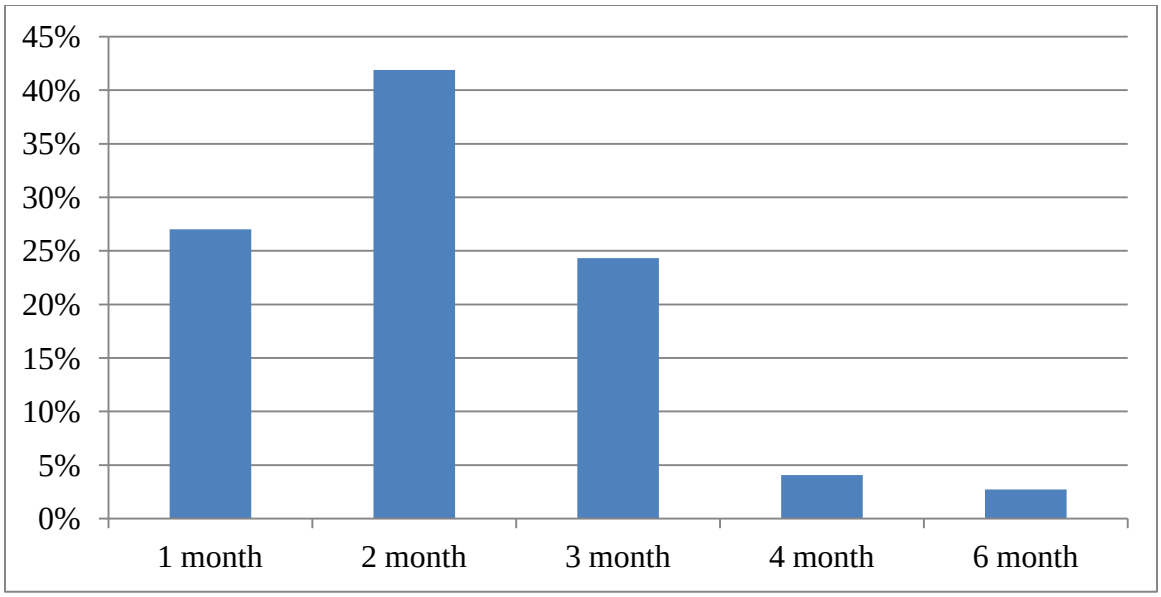


Figure 11: Preferred Length of Non-Traditional Rotation Length

When asked how likely they would be to complete a non-traditional residency if it was not ASHP accredited the response of "unlikely" or "very unlikely" was 69%, the response of "undecided" was 18% and the response of "likely" or "very likely" was 13% (Figure 12).

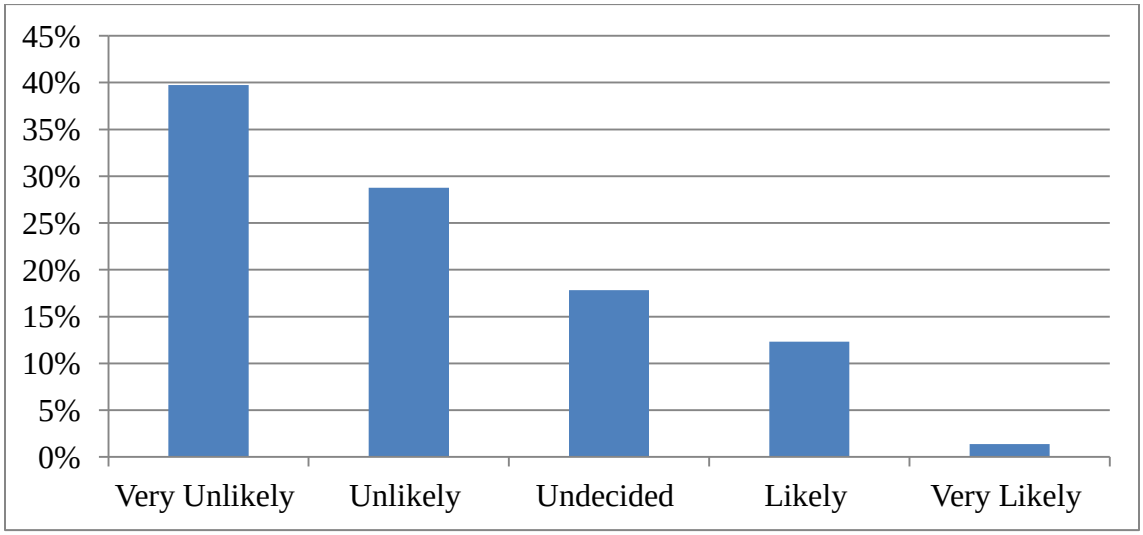


Figure 12: Likeliness to Complete a Non-Traditional Residency Based on ASHP Accreditation (n=83)

## Discussion

The interest in completing a residency after graduation of pharmacy school has currently surpassed the available residency positions causing many pharmacists to be unable to complete a residency immediately after graduation due to the shortage of pharmacy residency programs. Without this training they may not qualify for clinical pharmacy positions, limiting their potential for promotion and decreasing their work satisfaction (Padiyara, 2010). In addition, the responsibilities of all pharmacists are transitioning from a distributive focus to a clinical focus with the help of ASHP initiatives such as the PPMI. As the responsibilities of pharmacists change, training will need to be implemented to ensure pharmacists are competent in their new responsibilities. Non-traditional pharmacy practice residencies are an option for experienced pharmacists who would like to obtain residency training without leaving their current position and develop their skills for clinical responsibilities.

While the response rate of the survey was lower than expected, the survey respondents represented wide range in years of practice and practice areas. This distribution was very important for the survey results to ensure an accurate representation of many different sectors of pharmacy to evaluate the opinion of potential residency candidates and the managers that may hire non-traditional pharmacy practice residency graduates.

The number of respondents that had heard of non-traditional pharmacy practice residencies prior to completing the survey was higher than expected. When comparing residency trained pharmacists and non-residency trained pharmacists, those with

residency training were more likely to have heard of non-traditional residencies. When comparing opinions of pharmacists if non-traditional residencies are equal training to traditional residencies all groups felt they were equal between years in practice. While, the majority of residency trained pharmacists and non-residency trained pharmacists felt traditional and non-traditional residencies were equal training, there was an increase in the number of residency trained pharmacists who felt traditional residencies were more training than non-traditional residencies. This difference increases the need for ASHP accreditation to justify that non-traditional and traditional residencies are equal. When evaluating practice area, clinical inpatient pharmacists felt traditional residencies were more training than non-traditional residencies. When establishing a non-traditional pharmacy practice residency the program director may need to discuss with their inpatient clinical pharmacists how non-traditional residencies are equal training and what concerns they have about the residency program.

The survey data indicated that the ideal structure of a non-traditional pharmacy practice residency would be one to two years in length, not change the employees' salary, schedule rotations in 2 month blocks, acquire ASHP accreditation and not require continued employment after residency graduation. Required rotations should be scheduled in internal medicine, critical care, infectious disease, practice management and ambulatory care. The elective rotations should be tailored to the resident's preferences.

Institutions may be unable to justify the ideal model of a non-traditional residency as described above. Each institution will need to evaluate their goals and objectives of a non-traditional pharmacy practice residency to decide which characteristics they will incorporate (Figure 13). If the institution would like to continue the employee's current

salary they may sign a contract with the employee to guarantee continued employment after residency graduation to justify the training they received. If the program does not have the resident sign a contract for continued employment, they may consider decreasing the resident's salary to elongate the residency for the resident to pay back for their training.

The residency length may need to be longer than 2 years if the program would like to continue the current salary. This will limit the time the resident is taken away from their current position. The pharmacy may be able to avoid hiring additional staff to cover the resident's position if the resident is on rotation once every three months rather than every other month. The pharmacy department could also consider a restriction in salary increase after residency graduation. If the program has a shorter length, the resident will be removed from their current position more while in residency. The pharmacy department may need to hire additional pharmacists to ensure adequate staffing for the pharmacy. This may require the resident's salary to be decreased to justify the additional staff hired. To avoid hiring additional pharmacists the program may consider assigning staffing responsibilities during the rotation months in the evenings or on the weekends. This could potentially occur as part of the rotation depending on the pharmacy workload structure.

If the program needs the resident to complete the residency in the shortest amount of time possible they may decide the resident does not need to meet all the ASHP Goals and Objectives for a Pharmacy Practice Residency. Not applying for ASHP accreditation would eliminate requirements the program may deem unnecessary for training of their pharmacists. But, without ASHP accreditation, it will be harder for the pharmacist to

justify that the non-traditional residency is equal to the training received in a traditional residency. If the program will be ASHP accredited, it may need to be longer to meet all the requirements for ASHP accreditation. Also, the customizability of the rotations may be limited based on the goals and objectives the resident needs to meet.

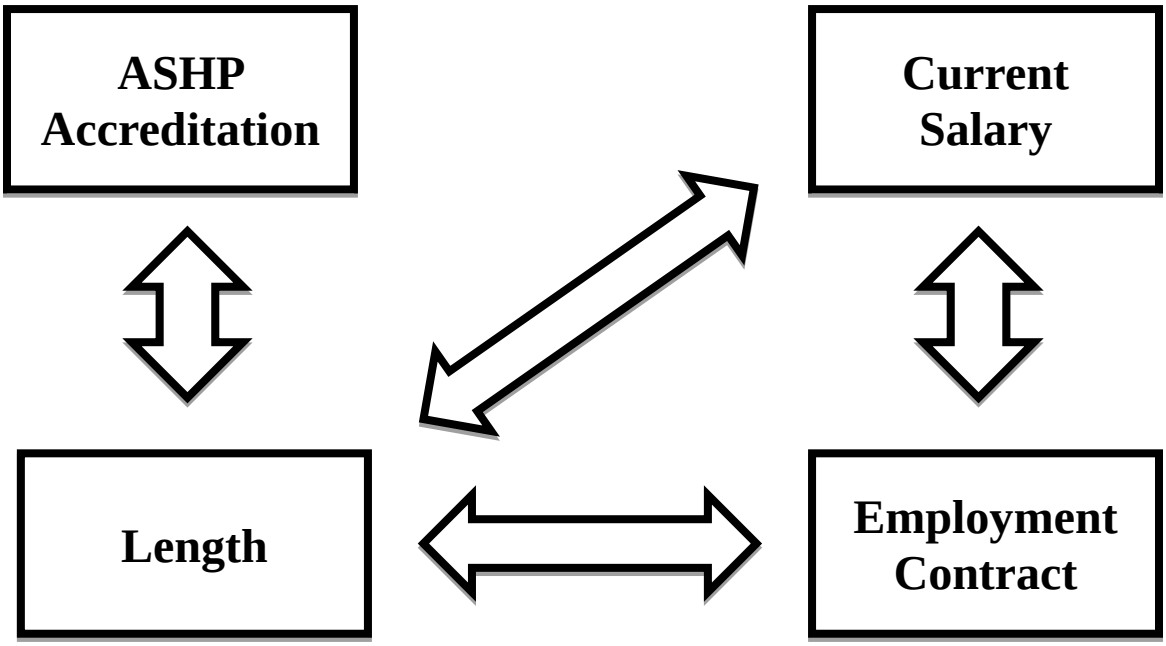


Figure 13: How to Compare Characteristics of Non-Traditional Pharmacy Practice Residency

After the residency program determines the structure of the non-traditional pharmacy practice residency, a return on investment will be important to demonstrate to continue the program. Potential evaluations to prove a return on investment include increased clinical interventions, increased precepting of pharmacy students, ability to start new clinical programs such as vancomycin monitoring, anticoagulation monitoring, IV to PO conversions, discharge counseling, medication reconciliation and pharmacists attending all codes. Some potential changes to the pharmacy are unable to be assigned a dollar value, such as a culture change to increased volunteers for projects and creating a

teamwork atmosphere throughout the whole pharmacy section by bringing together the clinical and staff pharmacists.

Given that this survey was distributed only to pharmacists who were employees of MEDVAMC and pharmacist members of TSHP, the results may not apply to institutions outside the state of Texas. The respondent population was lower for outpatient pharmacists as the TSHP membership is mainly hospital pharmacists. The goal of this survey was to gather a broad range of knowledge and opinions about non-traditional pharmacy practice residencies. The descriptive statistics presented in this study provide a baseline for perceptions of non-traditional residencies however a weakness of the survey is that it does not lend itself to robust statistical analysis. Future studies focusing on this area of research should build upon this knowledge with well powered surveys designed to enhance statistical analysis. As the descriptive statistics show, areas for future statistical analysis to determine the most important aspects of non-traditional residencies include compensation agreements while in residency, mandatory employment commitment, ASHP accreditation and residency length. Additional future areas to evaluate include how to bring pharmacists back into "learning mode" that have completed traditional schooling more than 5 years ago, how to overcome the barriers identified in this survey to encourage as many employees as possible to complete a residency, how to validate on the job training from other facilities and how non-traditional pharmacy practice residency graduates feel about their learning experience.

In conclusion, non-traditional pharmacy practice residency programs are an option to increase the number of residency trained pharmacists. Per this survey, non-traditional pharmacy practice residencies are seen as equal training to traditional

pharmacy practice residencies. When developing a non-traditional pharmacy practice residency program, the program director should consider incorporating the important aspects to potential non-traditional residency candidates including continuation of the pharmacist's current salary, completing the residency in the shortest time frame possible and ASHP accreditation.

## Appendix

### Appendix A: Survey

A non-traditional residency is generally an extended general pharmacy practice residency to be complete over two to three years. Residents that are accepted into a non-traditional pharmacy practice residency usually work at that institution prior to the start of residency. The resident will alternate between residency rotations and their current pharmacist position throughout the residency. Some programs continue the current salary of the pharmacist throughout residency while others may have a decrease in salary. Some institutions with non-traditional pharmacy practice residency programs require their graduates to work for their institution for a required period of time after residency graduation to "pay-back" for the training without a decrease in salary.

Q1 What practice setting do you work in?

- ❍ Inpatient (1)
- ❍ Outpatient (2)
- ❍ Clinical Pharmacy Specialist Inpatient (3)
- ❍ Clinical Pharmacy Specialist Outpatient (4)
- ❍ Administration (5)

Q2 How long have you been a pharmacist?

- ❍ 0-3 years (1)
- ❍ 4-5 years (2)
- ❍ 6-10 years (3)
- ❍ 10-20 years (4)
- ❍ 21+ years (5)

Q3 Have you completed post-graduate training? (select all that apply)

- ❑ No (1)

- ❑ PGY1 (2)
- ❑ PGY2 (3)
- ❑ Fellowship (4)
- ❑ PGY1/PGY2/MS (5)
- ❑ MBA (6)
- ❑ Other (ex. Certification, years of experience in specialty): (7)

  _____

Q4 Have you ever been or are currently a residency program director?

- ❍ Yes (1)
- ❍ No (2)

Q5 Have you heard of non-traditional pharmacy practice residencies prior to this survey?

- ❍ Yes (1)
- ❍ No (2)

Q6 Have you completed a pharmacy practice residency?

- ❍ Yes (1)
- ❍ No (2)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q7 Have you considered completing a traditional pharmacy practice residency?

- ❍ Yes (1)
- ❍ No (2)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q8 Have you considered completing a non-traditional pharmacy practice residency?

- ❍ Yes (1)
- ❍ No (2)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q9 How likely would you be to complete a non-traditional residency if it was 1 years long

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q10 How likely would you be to complete a non-traditional residency if it was 2 years long

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q11 How likely would you be to complete a non-traditional residency if it was 3 years long

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Q12 What do you think would be the ideal length of a non-traditional residency?

- ❍ 6 months (1)
- ❍ 12 months (2)
- ❍ 18 months (3)
- ❍ 24 months (4)
- ❍ 30 months (5)
- ❍ 36 months (6)

Q13 On a scale of 1 to 5 would a non-traditional residency equal traditional residency training

- ❍ 1 (traditional residency contains much more training) (1)
- ❍ 2 (traditional residency contains more training) (2)
- ❍ 3 (equal) (3)
- ❍ 4 (non-traditional residency contains more training) (4)
- ❍ 5 (non-traditional contains residency much more training) (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q14 What barriers would prevent you from completing a non-traditional residency?

(select all that apply)

- ❑ Decrease in salary (1)
- ❑ No guarantee of promotion after graduation from residency (2)
- ❑ Increase in work responsibilities after residency (3)
- ❑ Time commitment during residency (4)
- ❑ Requirement of completion of research project during residency (5)
- ❑ Stamina needed to complete residency (6)
- ❑ Managers will not see a non-traditional residency as equal training to traditional PGY-1 residency (7)
- ❑ Other: (8) _____

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q15 What factors would increase your desire to complete a non-traditional residency?

(select all that apply)

- ❑ Increase in clinical duties (1)
- ❑ Increase interaction with other health-care professionals (2)
- ❑ Decrease in distributive duties (3)
- ❑ Rounding with medical teams (4)
- ❑ Increase knowledge (5)
- ❑ Improve presentation skills (6)
- ❑ Improve precepting skills (7)
- ❑ Other: (8) _____

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q16 How likely would you be to complete a non-traditional residency if a promotion to clinical pharmacy specialist was not guaranteed?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Q17 What rotations should be required in a non-traditional residency? (select all that apply)

- ❑ Internal Medicine (1)
- ❑ Critical Care (2)
- ❑ Infectious Disease (3)
- ❑ Primary Care (4)
- ❑ Practice Management (5)
- ❑ Pediatrics (6)
- ❑ Mental Health (7)
- ❑ Oncology (8)
- ❑ Other: (9) _____

Q18 What experiences completed throughout the residency (longitudinal experiences) should be required in a non-traditional residency? (select all that apply)

- ❑ Research project (1)
- ❑ Primary care clinic (2)
- ❑ Staffing (3)
- ❑ Non-formulary medication review (4)
- ❑ Practice Management (5)
- ❑ Other: (6) _____

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q19 How likely would you be to complete a non-traditional residency if you were required to work for that institution for 1 year after residency graduation?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q20 How likely would you be to complete a non-traditional residency if you were required to work for that institution for 2 years after residency graduation?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q21 How likely would you be to complete a non-traditional residency if your salary did not change from the current amount?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q22 How likely would you be to complete a non-traditional residency if your salary decreased to 75% of the current amount?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q23 How likely would you be to complete a non-traditional residency if your salary decreased to 50% of the current amount?

- ❍ Very Unlikely (1)

- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q24 How likely would you be to complete a non-traditional residency if it is not ASHP accredited?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Undecided (3)
- ❍ Likely (4)
- ❍ Very Likely (5)

Q25 How long should a pharmacist be required to work for the institution where they completed the non-traditional residency after graduation from residency?

- ❍ No time requirement (1)
- ❍ 1 year (2)
- ❍ 2 years (3)
- ❍ 3 years (4)

Answer If Have you completed a pharmacy practice residency? No Is Selected

Q26 Rotations should be completed in _ month blocks

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 6 (5)

Answer If Have you completed a pharmacy practice residency? Yes Is Selected

Q27 Is ASHP accreditation necessary for a non-traditional residency?

- ❍ 1 (not necessary) (1)
- ❍ 2 (2)

- ❍ 3 (neutral) (3)
- ❍ 4 (4)
- ❍ 5 (absolutely necessary) (5)

## Appendix B: Policy and procedure manual

### Mission Statement and Outcomes

The purpose of the Non-Traditional PGY1 Pharmacy Practice Residency at the Michael E. DeBakey Veterans Affairs Medical Center is to prepare current pharmacist employees to become independent clinical practitioners of direct patient care in both inpatient and ambulatory settings, with the skills necessary for attainment of a clinical pharmacy position, and/or adjunct faculty position at college of pharmacy.

### Expected Residency Outcomes

The preceptors have discussed what they expect residents to learn over the course of the residency. The skills that you develop during the year will focus on the outcomes the preceptors have agreed are important. All of the functions you will undertake during the residency will be related to one of the outcomes. At anytime that you have concerns about the relationship between the functions and the outcomes, they need to be discussed with the preceptor, Residency Advisory Board and/or the Residency Program Director.

At the end of the residency, every resident should have reached these outcomes:

1. Ability to specify pharmacotherapeutic goals for a patient that integrate patient specific data, evidence based medicine, and ethical and quality of life considerations.
2. Enhancement of the ability to design a cost effective, safe and efficient pharmacotherapeutic regimen that meets the goals established for a patient.
3. Educate healthcare providers, patients, and caregivers at an appropriate level.
4. Develop pharmaceutical leadership and job marketable skills including professional maturity, organizational, and time management skills.
5. Function competently in multiple environments and in partnership with other health care providers.

### Standards of Practice Pharmaceutical Care

Michael E. DeBakey's Veterans Affairs Medical Center Pharmacy Service mission and goals have been established.

### Accreditation standards

The ASHP standards for the Pharmacy Practice Residency Program are important for your understanding because they are our contract with each resident. The areas and functions in which residents will have involvement are described in the accreditation standards. The supporting guidelines, technical bulletins, and statements for the best practice involving a required aspect of training are available in the office or online at www.ASHP.org.

A standard of practice for the pharmacists has also been developed. It is important to continuously assess your own practice skills to these standards.

## Attendance and Leave

### Leave policy

Each resident accumulates leave at the rate of 4 hours per pay period. Leave for professional meetings are usually administrative absence and does not count against vacation days (administrative leave requires advanced approval and residents must complete the appropriate forms at least 4 weeks before the meeting).

Leave must be planned and consideration given to the other members of the section. It is expected that annual leave will not interfere with responsibilities of the residents and other duties that are required (e.g., weekend staff duty). No specific times are set aside for vacations, therefore, the resident and preceptor must agree about leave. A

request for leave must be sent via electronic mail to the specific experience preceptor and the Residency Program Director for approval. Additionally, the timekeeper must be notified by electronic mail. Approved requests must be entered into the hospital computer for tracking by the timekeeper. If all of your annual leave is not taken prior to finishing the residency you will receive pay equal to the number of hours of unused annual leave.

Sick leave accumulates at the rate of 4 hours per pay period. Sick leave is not intended for use after working a weekend. If a resident is found to be repeatedly using sick leave after working the previous weekend, the use of sick leave will be reviewed and restricted.

If a resident needs to use sick leave, he/she must contact the Residency Program Director or Program Coordinator and the current experience preceptor before 9:00 a.m. on that day. If a resident is ill on a day of a scheduled conference, the resident will be required to present at the earliest possible time upon returning. The resident must make arrangements with the preceptor or Residency Program Director for a specific time.

**Long Term Leave policy**

It is expected that all residents will be in attendance for sufficient time on each learning experience to fulfill all the goals and objectives for that experience. Use of leave must be discussed with experience preceptors, and must be authorized, by preceptor and Residency Program Director, prior to leave.

If a situation arises in which a resident requires an extended period of leave, defined as 10 consecutive working days or 10 days in any one rotation, from their residency the following procedures apply:

1. All long term leave needs to be discussed with the Residency Program Director and experience preceptor as soon as the need for absence is known
2. Inability of the resident to meet the requirements for the affected rotation may result in one of the following:
    a. Extending the length of the residency
    b. Repeating the experience
    c. Additional assignments as deemed appropriate by the Residency Program Director and Residency Board
    d. Dismissal from residency program
3. Cases will be handled on an individual basis through the Residency Program Director and Residency Board

**Policy regarding "moonlighting"**

"External Moonlighting" is not allowed. Internal Moonlighting (fee basis) is available on a limited basis. Fee basis gives MEDVAMC pharmacy residents the opportunity to work on special projects including Loss Opportunity Costs (LOCs), patient and drug profile reviews and other assignments as per the Chief, Pharmacy Service and the Residency Program Director. Residents will be paid a staff pharmacist salary (GS 11 step 1) and can work at times that are convenient for them. No more than 20 hours/month of fee basis will be accepted. All fee basis needs to be brought to the attention of the Residency Program Director.

**1. Procedure**

a. ***Awarding a residency certificate:*** It is the responsibility of the program to determine whether a resident has satisfactorily completed the requirements of the residency. Residents who successfully complete the following requirements of the residency will be awarded a residency certificate:

- Compliance with institutional and departmental policies
- Achievement of all requirements for the resident as outlined by ASHP including goals and objectives
- Satisfactory completion of all required learning experiences
- Completion of a residency project
- Completion of all activities, projects and presentations as assigned by the RPD and preceptors

- Attendance of ASHP Midyear Clinical Meeting and the ALCALDE Southwest Leadership Conference.

Throughout the course of the residency it will be made clear that objectives are or are not being met. Some individuals may need remedial actions. If remedial actions are insufficient the residency certificate will not be issued. This determination will be made jointly by the resident, Residency Program Director, Residency Advisory Board, and the Chief of Pharmacy

b. ***Remediation:*** The Residency Program aims to develop advanced professional competence. Conceivably, a resident could be seen as lacking the competence for eventual independent practice due to a serious deficiency in skill or knowledge, or due to problematic behaviors that significantly impact their professional functioning. In such cases, the Residency Director, Program Coordinator, mentor, or Residency Board will help residents identify these areas and provide remedial experiences or recommended resources in an effort to improve the resident's performance to a satisfactory degree. Remediation will take place when a Pharmacy Resident receives one or more "Needs Improvement" score(s) on any one of their Evaluations of Performance in a Learning Experience. Conceivably, the problem identified may be of sufficient seriousness that the resident would not get credit for the residency unless that problem was remedied. Should this ever be a concern, the problem must be brought to the attention of the Residency Director at the earliest opportunity in order to allow the maximum time for remedial efforts. If remediation efforts are unsuccessful, the resident may be dismissed prior to completion of the residency. The steps of the remediation process are as follows:

1. When a preceptor identifies areas in either the resident's performance and/or conduct which "need improvement" as indicated in ASHP Residency Goals and Objectives, the preceptor will provide the resident with a written assessment of those goals and objectives needing improvement. The preceptor will provide suggested strategies to improve the performance and/or conduct of the resident. Feedback will be sought from the resident concerning their performance and/or conduct. The preceptor will schedule a follow-up meeting with the resident to discuss the resident's progress toward improving performance and/or conduct.
2. At the follow-up meeting, the preceptor will evaluate the resident's progress in areas identified as needing improvement. If the resident has not demonstrated improvement in performance and/or conduct then a formal process will be implemented to assist the resident in addressing these areas needing improvement.
3. The resident's preceptor will meet with the Residency Program Director, Program Coordinator and the resident's mentor to review the resident's performance evaluation.
4. The Residency Program Director, Program Coordinator and resident's mentor will then meet with the resident to discuss the areas needing improvement.
5. The Residency Program Director in conjunction with the Residency Board members will formulate an action plan to aid the resident in successfully obtaining the goals and objectives needing improvement. The plan will include specific objectives with related activities and/or conduct to be addressed, plan to improve, when and how often activities and/or conduct will be evaluated, and target date for successful attainment (defined as satisfactory progress OR

achieved). The resident, Residency Program Director, Program Coordinator and Residency Mentor will all sign the action plan thereby acknowledging their commitment to its achievement. The Chief of Pharmacy Service will be made aware of these actions.

6. The resident's progress toward fulfillment of the action plan will be presented to the Residency Board.
7. Failure to meet the action plan on target at a level of satisfactory progress OR better may result in the resident's dismissal prior to completion of the residency.

**c. Attitude:** The resident is expected to demonstrate professional responsibility, dedication, motivation, and maturity with regards to all activities and responsibilities associated with the residency for its entirety. The resident shall demonstrate the ability to work and interact with all the staff and patients of the Medical Center in a productive and harmonious manner. Appropriate attire, personal hygiene and conduct are expected at all times. The resident will adhere to all the regulations governing the operations of the Department of Veterans Affairs Medical Center without exception.

**d. Termination Without Prejudice:** Residents making satisfactory progress may be allowed to voluntarily withdraw from the residency program due to illness or problems of a personal nature that would interfere with their satisfactorily completing the program. This action would be taken after the resident and their mentor/advocate had discussed the problem and explored possible solutions. On approval of the RPD, the resident would be allowed to terminate the program without prejudice and a letter of explanation offered to the resident stating that the withdrawal was not a disciplinary action. The resident will forfeit any future benefits or compensation.

**e. Attendance:** If the resident is late to work more than one time (unexcused tardiness), the resident may be considered absent without leave and a pay reduction will be assessed for the time missed. Prompt arrival and attendance is required at all clinics, conferences, meetings, rounds and other scheduled activities during each and every rotation throughout the term of the residency. Unexcused absences and or tardiness will not be tolerated and can be a basis for termination from the program. It is the responsibility of the resident to contact the Residency Program Director and/or preceptor or the pharmacy secretary within 2 hours of the start of the scheduled tour to report unavoidable absences or tardiness. If the resident desires to be absent for personal reasons, the resident must follow VA Procedure requesting leave at least two weeks in advance of the planned absence. All such requests must be approved in the computer by the Residency Program Director as well as by the appropriate preceptor, before the absence will be considered excused. The resident is responsible for rescheduling or arranging alternate coverage for all activities which will occur during any planned absence.

**f. Licensure:** Non-traditional residents are expected to have completed all necessary licensure obligations prior to selection. In addition, if your assignments include a learning experience that is not located at MEDVAMC or another federal facility, you are **required** to show proof of Texas licensure one month prior to the beginning of that learning experience.

**g. The normal steps in a disciplinary/dismissal action process are as follows:**

1. Residents, when appropriate, may be given verbal counseling by their primary preceptor, mentor, or Residency Director if they fail to adhere to the residency requirements or VA policies and procedures. They may be counseled on the actions necessary to rectify the situation involved. The remedy or disciplinary actions will be decided by the involved primary preceptor, mentor, or Residency Director. This verbal counseling will also be documented in their Residency training file or can be written explicitly on the required residency evaluation forms by the involved primary preceptor, mentor, or Residency Director. The Residency Director must be informed of the action if they are not directly involved.

2. If a resident fails to correct his/her behavior, the Residency Board will meet and decide an appropriate disciplinary action for the resident (such as an additional project, removal from certain activities or working after normal hours, etc.) This action will be documented again in their residency training file and will be communicated to the resident by writing and to the residency preceptors. If the disciplinary action would affect patient care services (e.g. being removed from direct patient care), appropriate service managers/clinical coordinators should be consulted.

3. Unsatisfactory resolution of problems following the above will result in a final termination of the resident from the program. Final termination will be with a consensus of the Residency Board and the Chief of Pharmacy Service. Any benefits of compensation will be forfeited. A written notice of termination will

be prepared and the resident given a copy. This termination is final and the resident will not be allowed to complete the residency program.

**6. Grievances:** Any problem that may arise during the residency should first be dealt with by the appropriate preceptor. If the attempts to resolve the problem are unsuccessful, it should be brought to the attention of the Program Director. If for some reason it is unable to be resolved at that level, the Chief of Pharmacy will have the authority to make the final decision.

**Rotations and Learning Experiences**

The residents are scheduled for experiences throughout the 2 years in order to allow for learning in various areas. The experiences will be in the areas of primary care, internal medicine, infectious diseases, mental health and practice management. These experiences are based upon the impact on patient outcomes and learning. The experiences also provide continuous practice in several areas of the health care system. Any changes to this schedule need to be in agreement with all preceptors involved, the Residency Advisory Board, Residency Program Coordinator and/or the Residency Program Director. Example of a resident's schedule is below.

**Required Rotations**
Infectious Disease
Internal Medicine
Mental Health
Ambulatory Care
Practice Management

**Elective Experiences**

Each resident will have opportunities for four experiences that are electives. Elective experiences are specifically intended to tailor the residency experience to the resident's needs. Elective experiences can be completed in spinal cord injury, research/clinical trials, solid organ transplant, critical care, HIV, drug information, total parenteral nutrition, hematology/oncology, academics, cardiology, and long-term patient care. It is possible to elect to work in one area for more time to gain more confidence and skills (e.g., primary care). Electives may be completed at another hospital or health care facility as long as there is agreement with each facility involved. MEDVAMC has an agreement relationship with M.D. Anderson and Methodist Hospital. The pharmacy resident must have a pharmacist preceptor at the institution. The experience at another facility must be one that has a commitment to education that is identified by having a residency program.

**Elective Rotations**
Critical Care
Solid Organ Transplant
Spinal Cord Injury
Cardiology
Nutrition Support
Anticoagulation
Home Based Primary Care/Geriatrics
Academia
HIV Clinic
Oncology*
Critical Care*
Transplant*
*Off-Site

**Example Rotation Schedule**

| **Resident** | **July** | **August** | **September** | **October** | **November** | **December** |
|---|---|---|---|---|---|---|
| Resident 1 | IM | Staff | Amb Care | Staff | ID | Staff |
| Resident 2 | Staff | ID | Staff | IM | Staff | Amb Care |
| | **January** | **February** | **March** | **April** | **May** | **June** |
| Resident 1 | ICU | Staff | MH | Staff | Transplant | Staff |

| | | | | | | |
|---|---|---|---|---|---|---|
| Resident 2 | Staff | MH | Staff | SCI | Staff | IM |
| | **July** | **August** | **September** | **October** | **November** | **December** |
| Resident 1 | PM | Staff | HBPC | Staff | IM | Staff |
| Resident 2 | Staff | HBPC | Staff | PM | Staff | ICU |

**Longitudinal Experiences**

Non-traditional residents will complete longitudinal experiences in primary care (half day per week) during rotation months. Long-Term Care Chart Review (three to five patients assigned per resident with monthly chart reviews in nursing homes) is expected to be conducted every month throughout residency program. This allows residents to see continuity of care for patients.

**Goals and Objectives, Feedback and Evaluations**

ASHP has assisted Pharmacy Practice Residency programs by developing a set of goals and objectives. The goals and objectives are separated into practice foundation, direct patient care, and practice management. Internal to these areas are drug information and drug policy development goals and objectives that must be part of pharmacy practice. Each goal has an objective(s) that should be completed to successfully reach the goal. **It is critical that each resident reviews these goals since they are the basis of your training experience.** The goals are followed by criteria that may have several components. You can review the criteria that are considered markers of reaching the objective as a guide to improving your skills. The goals and objectives form the basis of each period evaluation.

At the beginning of every resident's experience, he/she needs to review with the preceptor his/her goals and objectives that are established and any specific plans for the

resident during that time. The preceptor needs to discuss with the resident the plans for the experience in order to maximize the learning opportunity.

The Goals and Objectives form the basis for feedback and evaluation. Feedback and evaluations are essential components of your training. It is important to differentiate the two. Feedback is given at short intervals to provide the resident with an ongoing assessment of individual tasks, patients, and problem solving exercises (e.g., having progress notes co-signed). Frequent feedback should be expected from the preceptor while you are completing various experiences. The resident should ask the preceptor for feedback on a regular basis.

Evaluations are a summation of your skill development over a longer time interval and should reflect the feedback provided during some time period. The purposes of evaluation are to provide the resident with an assessment of progress in the various experiences and to make recommendations for improvement in practice. Prior to each experience you should review the evaluation form to understand the expectations. If additional objectives are needed or desired, they should be considered prior to or early in the rotation. The evaluation is intended to review with the resident the progress made over the course of the rotation.

Each resident will be asked to give an honest appraisal of the preceptor and the rotation. Once the preceptor and the resident have completed evaluations they will be discussed. After discussion the preceptor and resident will sign the evaluation that will then be sent to the Residency Advisory Board and the Program Director. Evaluations will be reviewed and deficiencies and/or disciplinary actions that are needed will be addressed by the Residency Advisory Board.

Rotation evaluations are due by the first Friday of the following month. Evaluation forms are available in the Residency Manual.

**Self-Evaluation**

A quarterly self-evaluation is an important component of the residency program. These will be completed in the last week of September, December, March, and June. The evaluation should be introspective of where the resident feels he/she is progressing. The self-evaluation should be related to the initial plan that was submitted in July 2011. An example self-evaluation form is provided in this manual. These evaluations will be reviewed by the Residency Advisory Board members. Changes in experiences may be recommended by the Advisory Board to help residents attain the goals.

**Residents Development Plan**

At the start of the residency program, the RPD and each resident will meet to discuss and develop an individualized development plan based upon each resident's interests, strengths and weakness. This plan will be reviewed and adjusted quarterly or as needed.

**Staffing responsibilities**

The staff component will take place through months that the resident is not on rotation. During a rotation month the resident will not be pulled due to short staffing. If changes in staff level require the resident to be in the staffing rotation, that rotation will be rescheduled in the future.

**Attendance of Conventions**

The non-traditional resident will attend conventions in the second year of their residency to allow them time to complete their residency project to be presented as a

poster presentation at ASHP Midyear Clinical Meeting and as a platform presentation at Alcalde to meet ASHP requirements.

## References

Smith KM, Sorensen T, Connor KA, Dobesh PP, Hochns, JD, Marcus KB, Pass SE, Seybert AL, Shapiro NL. "Value of conducting pharmacy residency training – The organizational perspective." *Pharmacotherapy.* 2010;30(12)490e-510e.

National Matching Services Inc. 2012.

Pharmacy Practice Model Initiative, Executive Summary. *Am J Health-Sys Pharm*. 2011;68:1079-85.

VA Handbook 5005/55

Padiyara RS and Komperda KE. "Effect of postgraduate training on job and career satisfaction among health-system pharmacists." *Am J Health-Sys Pharm*. 2010;67:1093-1100.