

EVALUATION PLAN

Group 6 Project



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Introduction & Background

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Pharmacy residents at the Mayo Clinic College of Medicine and Science who wish to become proficient, independent general practitioners, capable of providing broad pharmacotherapy knowledge to a multitude of patient populations, must first complete their postgraduate, year one (PGY-1) Pharmacy Residency at one of the select Mayo Clinic Health System locations.

The PGY-1 Pharmacy Residency at Mayo Clinic Health Systems provides the high-quality educational and clinical experiences needed to create a well-rounded, fully competent clinical pharmacist.

As a PGY-1 pharmacy resident, residents devote much of their time as a member of an interdisciplinary team, providing the pharmacists a more comprehensive training. The PGY-1 program curriculum is designed to increase and refine a resident's clinical competency, provide evidence-based pharmacotherapeutic care plans, and develop their confidence as clinical pharmacists. As part of the program, pharmacy residents work alongside world-class pharmacist preceptors, physicians, scientists, and allied health staff that offer feedback as residents provide patient-specific pharmaceutical care services. Allowing residents to interact as members of an interdisciplinary team allows preceptors to provide feedback to enhance their druginformation retrieval skills while ensuring that residents can provide medication-related care to patients with a wide range of conditions.

With the successful completion of the PGY-1 training, pharmacy residents are then eligible for board certification and postgraduate, year-two (PGY-2) pharmacy residency training or to directly enter the workforce providing excellent clinical care to patients.

At the Mayo Clinic Health Systems – Rochester and Mayo Clinic Health Systems – Midwest locations, pharmacy residents in their PGY-1 training are required to obtain their Teaching and Learning Certificate (TLC). The TLC program is a 12-month program running the duration of the residency year (July-June). At the beginning of the academic year, residents enrolled in the TLC program attend an eight-hour workshop.

The workshop was designed to prepare PGY-1 residents for the different teaching experiences they may encounter and covers a multitude of teaching topics such as the foundational principles of pedagogy, how to develop courses, how to write measurable objectives, and how to create evaluations. The latter portion of the workshop includes interactive case-studies, focusing on difficult or challenging scenarios that residents may encounter.

Recently, a group of students in the EDIT 7350 course at The University of Georgia (UGA), were tasked with the evaluation of a training program. The UGA Design Team (Group 6) reached out to Mayo Clinic Health Systems – Rochester TLC and postgraduate residency leadership to request permission to conduct an evaluation of the PGY-1 Workshop. The Design Team provided an overview of the assignment and the benefits that the evaluation outcome could have on the PGY-1 program; leadership happily agreed to allow their program to be used for this evaluation plan case-study.

UGA Design Team - Group 6

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Client information

Mayo Clinic pharmacy residencies were established in 1976 to bolster the caliber of pharmacists in the profession and at Mayo Clinic Health Systems. The Mayo Clinic has three shields to advance healthcare: patient care, research, and education. Along with the American Society of Healthcare Pharmacist (ASHP) standards for residency1-3, the Mayo Clinic pharmacy residency program places a significant emphasis on the importance of the three shields in the development of their students, residents, and learning systems.

In 2016, members of the pharmacy residency program identified the need to further the advancement of residents in the education shield. The result was the development of the Training and Learning Certificate (TLC) program. The TLC program is a multi-layered program and begins with a required, eight-hour workshop at the start of the residency year. This workshop is a requirement for all PGY-1 residents as it lays the groundwork for all the requirements of the TLC program. Upon completion of the TLC workshop, the continuing education and assessment of teaching is handed over to TLC mentors (also referred to as, preceptors). See *Figure 1. Overview of the whole TLC program* for graphic display of TLC program.

In recent years, the need to evaluate the workshop became clear. PGY-1 leadership has asked Group 6 to conduct an evaluation of workshop content and information dissemination methods, to ensure that PGY-1 residents are obtaining the necessary information to earn their Certificate, and in a manner that is built for student success.

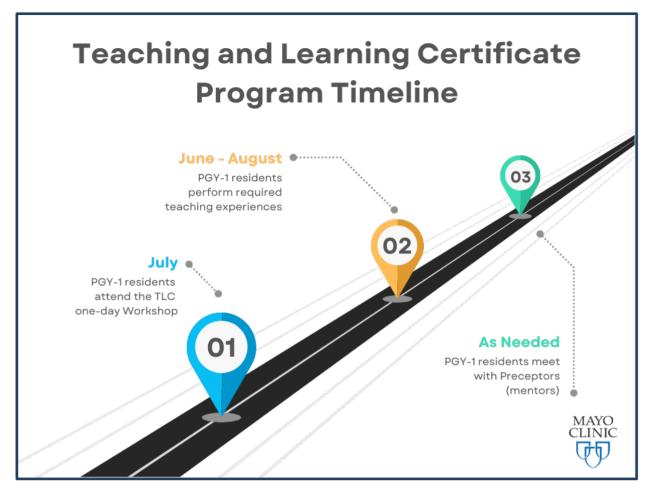


Figure 1. Overview of the whole TLC program.

Workshop Details

The Mayo Clinic Pharmacy Training and Learning Certificate (TLC) program was developed based on American Society of Healthcare Pharmacist (ASHP) requirements¹⁻³ and American College of Clinical Pharmacy (ACCP) recommendations for institutions with teaching programs outside of a school or college of pharmacy⁴.

Those requirements, which must have documentation with reflection in a teaching portfolio, include the following:

- 1. Present two formal lectures, each lasting a minimum of 30 minutes
 - a. Continuing Education (CE)-accredited presentations are preferred
- 2. Provide a multidisciplinary in-service (provide a brief presentation to a healthcare provider audience other than pharmacists, (e.g. physicians, advanced practice providers, nurses, respiratory therapists, etc.)

- 3. Facilitate a small group discussion
 - a. The discussion cannot be in a lecture-style format.
- 4. Teach using real-world patient case(s)
- 5. Create a teaching philosophy

In addition to the requirements set by the ASHP¹⁻³, the program also contains several components that have been adapted from an American College of Clinical Pharmacists (ACCP) White Paper⁴. By combining the ASHP requirements¹⁻³ and ACCP components⁴, TLC program developers and leaders designed a workshop they felt was best suited for the preparation of PGY-1 residents to meet the requirements of their residency year.

To ensure that the requirements have been met, the PGY-1 resident must demonstrate a level of achievement or mastery of each objective. The current objectives of the TLC workshop are:

- 1. Discuss important elements of a teaching philosophy and teaching portfolio
- 2. Explain teaching strategies that can be applied in large group settings
- 3. Demonstrate creation of learning objectives and assessment questions
- 4. Recognize key accreditation standards and expectations for pharmacy learners
- 5. Demonstrate giving feedback to a learner in different scenarios

The following are all of the topics covered during the workshop:

- 1. Teaching Philosophies and Course Development (lecture development and how it fits into a course)
- 2. Writing Learning Objectives
- 3. Writing assessment questions, quizzes, and evaluations of learning
- 4. Teaching strategies and activity learning strategies
- 5. Accreditation Standards
- 6. Setting Expectations
- 7. Preceptor Roles and ways to incorporate them into practice
- 8. Giving Feedback
- 9. Preceptor panel on feedback and difficult situations
- 10. Teaching portfolio

The current workshop and TLC program is set up to meet Required Competency 4.1 and 4.2 and Elective Competency E6: Teaching and Learning of ASHP standards¹⁻³. Current assessment of this program revolves around resident reflections post-workshop that are recommended to be completed within 2-weeks of the workshop but not required and successful completion of the TLC requirements.

Concerns raised by the client for immediate or future consideration are as follows:

- 1. How well does the workshop prepare residents for their teaching experiences?
- 2. What may be done to improve the workshop to aid residents in their teaching experiences?
- 3. How are the current teaching experiences available meeting the needs of ASHP standards R4.1, R4.1 and E6?
- 4. Considering that the workshop occurs only once a year, but teaching experiences range through the whole residency year, more or better training may be necessary to make the residents successful in completing the program and accomplishing ASHP requirements R4.1, R4.1 and E6?

PURPC EVALUAT

The purpose of this evaluation is to determine if the Training and Learning Certificate (TLC) Workshop at the Mayo Clinic Health Systems – Rochester and Mayo Clinic Health Systems – Midwest locations are providing the foundational knowledge to deliver effective communication and develop a resident's teaching skills, both of which are required to complete the TLC program.

The Training and Learning Certificate (TLC) program at the Mayo Clinic Health Systems – Rochester and Mayo Clinic Health Systems – Midwest locations are currently evaluated using resident self-reflections. To find out more about the self-reflections, members of UGA Design Team -Group 6 reached out to TLC and PGY-1 leadership.

During the consultation with TLC Program Director, Lori Herges and PGY-1 Residency Program Director, Scott Nei, Group 6 was able to confirm that, in its current state, evaluation of the TLC workshop is conducted exclusively through the PGY-1 resident reflections. However, while both Dr. Herges and Dr. Nei strongly supported the TLC workshop and touted its success, they were unable to provide additional information about the assessment or management of the data collected from the resident selfreflections they currently receive.

The Group also noted that resident reflections are not standardized. PGY-1 residents are not provided a template or question prompts prior to being asked to complete the reflection. Herges and Nei mentioned that many topics covered in the workshop may be repeated between residents and preceptors later in the year as well. Per their report, no recent changes have been made to the workshop other than the occasional speaker change based on scheduling conflicts, but topics remain the same. To determine if the TLC workshops are providing the foundational knowledge to deliver effective communication and develop a resident's teaching skills, the members of Group 6 will use formative evaluation of the residents' performance. Residents will be assessed during and upon completion of the workshop. These results will be compared to the expectations and requirements outlined in the TLC program.

The workshop will also be summatively evaluated to assess value added to those on the receiving end of residents' teaching (healthcare providers at Mayo Clinic). While it appears that the workshop might be successful at laying the foundations, data collected from evaluation will confirm or deny suspicions.

Results from our evaluation will be used to draft an improvement plan, if needed, to implement in a systematic fashion that has stakeholder support. Process and number of improvements will depend on the evaluator team size and focus areas of improvements needed.

STAKEHOLDERS

Table 1. Stakeholder Information

Stakeholder	Importance Level	Perspective of Interest	Role in the Evaluation
TLC Program Director • Lori Herges	Primary– Implementer	Effectiveness, consulting, application management/workshop planning	 Involved in evaluation planning Participating in data collecting Recipient of evaluation
PGY 1 Program Director • Scott Nei	Secondary -Partner	Effectiveness, education planning	Involved in evaluation planningRecipient of evaluation
Assistant PRDs • Jon Leung • Abby Hendricks • Susan Horseman	Secondary -Partner	Effectiveness, education planning	Involved in evaluation planningRecipient of evaluation
Mayo Rochester and Midwest Residency Director • Garrett Schramm	Secondary	Residencies oversight, effectiveness	Recipient of evaluation
TLC Mentors	Primary- Implementor	Effectiveness	 Involved in evaluation planning Implementation Participating in data collecting Recipient of evaluation
PGY-1 Residents	Secondary	Effectiveness/impact of workshop	Recipient of evaluationParticipating in data collecting
Recipients of PGY-1 residents' education opportunities	Secondary	Effectiveness/impact of workshop	 Participating in data collection

Introduction

The current Teaching and Learning Certificate (TLC) program for PGY-1 residents is a component of the PGY-1 residency. The initial introduction to the TLC program is a one-day workshop whose objectives are to introduce a teaching philosophy and teaching portfolio, explain teaching strategies that can be applied in large group settings, demonstrate creation of learning objectives and assessment questions, recognize key accreditation standards and expectations for pharmacy learners, and demonstrate giving feedback to a learner in different scenarios.

Program Overview

The TLC program overall aligns with the ACCP white paper4 on teaching experience for a large, academic medical center, not affiliated with a school or college of pharmacy. The teaching workshop complements the program and highlights key aspects of the ACCP white paper:

- Development of a teaching philosophy and
- teaching portfolio that captures all teaching activities.
- Display a baseline knowledge of skills needed for teaching experiences.
 - Writing learning objectives, assessment strategy.
 - Developing a professional presentation (e.g., lecture handouts, audiovisuals, outline/ script, technology, delivery style).
 - Tailoring a presentation to the audience (students, peers, other health professionals).
 - Evaluating teaching experiences (student, peer, and self-evaluations).
 - Evaluating student performance and providing feedback.
 - Developing and using a patient case for teaching.
- Practice self-reflection by journaling about the workshop after the workshop is completed.

Current Workshop Offering

The current workshop contains the following sections, content, and schedule.

Time	Торіс	Speaker
0800 - 0810	Introduction	TLC Director
0810 – 0900	 Teaching Philosophies Course Development Lecture development How it fits into a course 	Preceptor(s)
0900 – 0930	Writing Learning Objectives	Preceptor(s)
0930 – 0945	Short break	
0945 – 1030	Writing assessment questions/quizzes/evaluations of learning	Preceptor(s)
1030 - 1130	 Teaching strategies/active learning strategies Team based learning Active learning Online learning 	Preceptor(s)
1130 – 1230	Lunch	
1230 - 1315	 Accreditation standards Student rotation prospective and interactions with schools – how assigned and different requirements Residency standards – ASHP and select highlights Tech for what is requirements 	Preceptor(s)
1315 – 1400	 Setting Expectation Walk through rotation expectation/orientating learners/anticipating issues 	Preceptor(s)
1400 – 1410	Short Break	
1410 - 1500	Preceptor Roles and different way to incorporate them into practice per ASHP resources ¹⁻³	Preceptor(s)
1500-1555	 Giving Feedback Setting a safe environment, mutual respect, and mutual goal. Providing constructive criteria-based feedback Difficult feedback 	Preceptor(s)
1555 – 1625	Preceptor Panel on feedback and difficult situations	Preceptor(s)
1625 – 1630	Teaching Portfolio and Wrap-up	TLC Director

Context

The TLC workshop is a one-day event offered once per year but aims to prepare residents for a year's worth of teaching activities. The workshop aims to introduce all that will be necessary for PGYI residents to perform their teaching experiences and obtain their teaching certificate.

One constraint of the workshop timing is due to meeting the scheduling of multiple sites (Rochester and 3 Mayo Midwest sites). The workshop has been limited to a oneday training as an agreement between residency leadership at Rochester and Midwest for a specified time allotment during the orientation block of residency. Teaching the PGY1 residents in a large group outside of that time is difficult due to their other many ASHP requirements¹⁻³ that demand their time. After completion of the workshop, continued education specific teaching/assessment falls to TLC preceptors. Neither ASHP¹⁻³ nor ACCP⁴ recommend a standard way of evaluating teaching and learning programs and associated initiatives outside of resident performance making it difficult to have data on impact to recipients of residents' teaching.

Population and Needs

Why train?

Much of pharmacy experiential education is led by practicing pharmacists. After PGY-1, residents will either enter the workforce or pursue a PGY2 to specialize followed by entering the workforce. Both paths result in the resident then being able to precept and teach others. Outside of pharmacy residency, there are not many avenues for pharmacists to easily develop their teaching skills that will serve them throughout their career. The initial TLC workshop is pivotal in laying the groundwork.

Who to train?

Mayo Clinic Rochester PGY-1s are required to complete the TLC program. All will attend the workshop and will have to complete their teaching experiences by the end of the residency year (June).

When, where, and how to train?

Due to scheduling constraints of the PGY-1 year, the current workshop is held at the end of PGY-1 orientation during the last week of July annually. The workshop is made up of 10 different topics presented by TLC preceptors in a live, face-to-face environment.

What to include?

The workshop should introduce the residents to all the skills necessary for them to complete their teaching experiences of the residency year.

This may include, but is not limited to, as identified by the client:

- Teaching Philosophies and Course Development (lecture development and how it fits into a course)
- Writing Learning Objectives
- Writing assessment questions, quizzes, and evaluations of learning
- Teaching strategies and activity learning strategies
- Accreditation Standards
- Setting Expectations
- Preceptor Roles and ways to incorporate them into practice
- Giving Feedback
- Preceptor panel on feedback and difficult situations
- Teaching portfolio

Residents should gain resources and draft plans for how they may use topics covered during the workshop throughout the residency year.

The workshop should align with ASHP PGY-1 evaluation standards that preceptors will use to evaluate the PGY-1 resident during the residency year.

Age and Phase

The TLC workshop has been in use since 2017. The workshop has changed very little subject matter wise over the years other than adding the active learning session. There are current discussions surrounding changes to the requirements of the TLC program, such as requiring a virtual teaching experience, but that effect is likely not to take place until the 2023-2024 residency year. However, there are no such plans to redesign the TLC workshop currently. Therefore, the workshop is in the implementation stage according to Hamiliton and colleagues.⁵

Table 2. A Simplified Logic Model in a Table Form

Resources/Inputs	Activities	Outputs	Short-Term Outcomes	Long-Term Outcomes
 Volunteer preceptors presenting each topic of the workshop Organizer of workshop (TLC director) PGY-1 residents that attend Technology to display PowerPoints 	 Topic specific lectures Interactive pieces for each session: Teaching Philosophy: discussion o components of teaching philosophy Writing objectives: writing objectives in groups Active learning: group discussion and creating plan on implementation/how to use/how to evaluate active learning Accreditation: writing own assessments Setting expectations: group case scenarios Preceptor roles: pre- and post-informal reflections and group work defining roles by setting Giving feedback: role play 6 different scenarios Resident reflection 	 Increased collaboration amongst residents Practice writing objectives Draft of how resident will use active learning in their required experiences Demonstration of providing feedback 	 Develop teaching strategies for TLC experiences as a direct result of the workshop that prepares PGY-1 residents to teach Establish context for preceptor roles and feedback 	 Obtain TLC certificate Able to walk into any teaching environment and be able to teach effectively

Discussion - Logic Model

Resources and Inputs

The TLC director organizes the TLC workshop by recruiting TLC preceptors to present the ten different areas covered in the workshop. The preceptors create the material to teach their respective areas based on their knowledge and experiences. Typically, a PowerPoint presentation is used and therefore technology to display the PowerPoint is needed.

Activities and Outputs

The existing workshop is presented in ten different sections with short breaks throughout the day. Each topic has PowerPoint slides prepared by the presenter. Seven of the ten topics have interactive components to aid in engagement and retention. The interactive pieces allow the residents to collaborate with one another while practicing skills such as writing learning objectives and providing feedback. After the workshop, residents are required to write a reflection of their thoughts on the workshop and how they might use the material covered during their residency year.

Outcomes

The overarching goal of the workshop is to prepare the residents with all the necessary teaching skills to complete teaching experiences and obtain their teaching certificate (long-term outcome). Upon the receipt of the certificate, it is also anticipated that the resident would then be able to proficiently teach via a (pharmacy) grand rounds [formal medical presentation], precept pharmacy learners [oversee–like a teacher in charge of a student teacher], small group discussions, and facilitate interdisciplinary education. These are all experiences a practicing pharmacist would be expected to be able to do if asked.

Short-term outcomes of the workshop should be skills and behavioral changes. Residents will develop teaching strategies for TLC experiences as a direct result of the workshop that prepares PGY-1 residents to teach. Additionally, residents will establish context for preceptor roles and feedback they can use while being precepted and co-precepting on their teaching weeks with a pharmacy student.

ALUA

Introduction

The UGA Design Team - Group 6 will use the information contained in this section to determine if the Training and Learning Certificate (TLC) Workshop at the Mayo Clinic Health Systems – Rochester and Mayo Clinic Health Systems – Midwest locations are providing the foundational knowledge to deliver effective communication and develop a resident's teaching skills, both of which are required to complete the TLC program.

Results from this evaluation will be used to draft an improvement plan, if needed, to implement in a systematic fashion that has stakeholder support. Process and number of improvements will depend on the evaluator team size and focus areas of improvements needed.

Stakeholder	Stakeholder Needs	Evaluation Focus Areas	Evaluation Questions	Evaluation Design
Program Directors	 Program adherence to ASHP standards Success in program implementation Effectiveness of workshop in developing Knowledge, Skills, and Abilities (KSAs) of PGY-1 residents 	 TLC workshop meeting ASHP requirements TLC workshop achieving predetermined objectives 	 To what extent does the training meet the ASHP requirements? (Focus specifically on Required Competency 4.1 and 4.2 and Elective Competency E6) Do the preceptors meet the requirements of the national benchmarks? To which extent does the redesigned training material support and facilitate the development of knowledge and values of the trainees? 	 Reviewing ASHP program documentation Reviewing the TLC training program documentation - Pre and post training surveys and questionnaires - Post training follow-up through interviews or focus group
TLC Preceptors (Mentors)	 Topical areas prepare PGY-1 resident for teaching experiences Effectiveness of workshop in developing Knowledge, Skills, and Abilities (KSAs) of PGY-1 residents Successful application of learning in PGY-1 teaching experience 	 Workshop effectiveness Preceptor feedback from teaching experience KSA development 	 What topic, if any, are PGY-1 residents struggling with in their PGY-1 teaching experiences? How effective is the workshop in preparing PGY-1 residents for teaching experiences conducted throughout the remainder of the PGY-1 year? Residents improved in terms of helping them understand the information or reach the outcomes? 	 Resident reflections Post-presentation feedback from preceptors Review quarterly evals from preceptors of residents

Table 3. Focus Areas, Questions, Design, and Rationale of Your Evaluation

Stakeholder	Stakeholder Needs	Evaluation Focus Areas	Evaluation Questions	Evaluation Design
PGY-1 Residents	 Topical areas prepare PGY-1 resident for teaching experiences Sufficient time allotted to learn materials Effectiveness of workshop in developing Knowledge, Skills, and Abilities (KSAs) of PGY-1 residents 	 Effectiveness of KSA development in workshop materials Level of preparedness of resident at the conclusion of the workshop 	 What topic, if any, do presenters need to spend more - or less - time covering? What is the resident's level of preparedness for their PGY-1 teaching experiences? Does the repeated lessons via teaching experiences reinforce the learning from the workshop so that a resident feels better prepared for real-world application? 	 Post-workshop feedback from residents Pre- and post- presentation feedback from residents Pre- and post- teaching experience feedback from residents
Recipients of PGY-1 residents' education opportunities	 Successful application of learning Applicability to job Effectiveness of workshop in developing Knowledge, Skills, and Abilities (KSAs) of PGY-1 residents 	 Workshop effectiveness Resident preparedness 	 How effective is the workshop in preparing residents for their role as a pharmacist? How has the workshop benefited the recipients of PGY-1 residents' education opportunities? 	 Survey healthcare providers at Mayo Clinic that have worked with PGY-1 residents Survey TLC Preceptors that have worked with PGY-1 resident Post-presentation feedback from residents

Evaluation Design Rationale

Program directors for the Training and Learning Certificate (TLC) program and the first year Pharmacy Residency program at the Mayo Clinic Health Systems – Rochester and Mayo Clinic Health Systems – Midwest locations conducted a cursory review of the TLC program and found that an existing need for an evaluation to be conducted on the TLC workshop specifically.

TLC leadership recognized that there was limited data available that could adequately assess the workshop content to ensure residents are gaining foundational knowledge to be effective in their communication and teaching skills. In addition to the impact of the workshop on the residents, TLC leadership would like to assess the impact that the program is having on the Mayo Clinic community.

Meetings with the client and other key stakeholders and review of workshop materials led to a logic model for the TLC workshop to work systematically through an evaluative process. By identifying the stakeholders, activities, and outputs, Group 6 can compare actual results with desired immediate results. Furthermore, this allows alignment of short- and long-term outcomes that guide from a high-level perspective thus maintaining a consistent evaluation goal.

Our suggested evaluation plan consists of quantitative and qualitative strands. The quantitative strand will contain match Likert scale survey data on perceptions and confidence level pre- and post-workshop and teaching experiences. In addition, document review will be able to answer dichotomous-yes/no questions-on if material meets ASHP standards. Qualitative data will consist of open-ended responses in surveys, resident reflections, and comments from preceptors. Responses will be kept confidential.

Description

Meeting ASHP Standards

As part of communication with the PGY-1 leadership, the concern of the efficacy of the TLC Workshop was raised. As the workshop has remained unchanged over the last five years, leadership questioned whether the workshop was still setting residents up to meet ASHP accreditation standards.

The evaluation team identified TLC workshop presentations and quarterly preceptor evaluations of residents to obtain relevant and quality information. The TLC workshop presentations contain the content taught to PGY-1 residents, which should meet ASHP requirements, which should then prepare residents for teaching after residency. Additionally, the quarterly evaluations track resident progress of the ASHP requirements through the residency year starting after the TLC workshop.

Results from this evaluation will be used to draft an improvement plan, if needed, to implement in a systematic fashion that has stakeholder support. Process and number of improvements will depend on the evaluator team size and focus areas of improvements needed.

TLC Workshop Efficacy: Preparing the Resident

Since the TLC workshop is the first step in the TLC program, its efficacy is key to the TLC program's success overall. As the workshop lays the foundation, PGY1 leadership and TLC mentors share concerns that the current format and workshop may not be fully preparing PGY1 residents for all their teaching experiences. TLC mentors and residents and resident reflections were identified as data sources. These stakeholders will experience the change and impact of the training firsthand. Information will be obtained through surveys after the workshop and at the end of the residency year. Additionally, resident reflections will be reviewed that residents are expected to complete post-teaching experience to gain insights on how prepared they were to give a successful learning experience.

TLC Workshop Efficacy: Resident Performance

Execution of teaching experience is a key aspect of the TLC program that the TLC workshop addresses to have an impactful experience. To appropriately assess efficacy, the data will be gathered from the audience of the PGY1 residents. A survey will be used at the end of each PGY1 teaching experience to assess the audience's perceptions of the PGY1's ability to teach them.

Table 4. Evaluation Data Collection and Analysis Plan

Evaluation Questions	Data Collection Method	Data Source(s)	Activities	Data Analysis
To what extent does the training meet the ASHP requirements? (Focus specifically on Required Competency 4.1 and 4.2 and Elective Competency E6)	 Document review (Specific teaching ASHP requirements) Quarterly evaluation via Pharmacademic[™] (Progression dashboard) 	 Presentations given during the TLC workshop Pharmacademic[™] evaluations of PGYI residents by preceptors 	 Reviewing ASHP specific teaching objectives (Focusing on R4.1, R4.2, and E6.1) Reviewing of TLC Workshop presentations Review Pharmacademic[™] evaluations 	 Content analysis Quarterly Evaluation – descriptive statistics and qualitative (themes)
 How effective is the workshop in preparing PGY-1 residents for teaching experiences conducted throughout the remainder of the PGY-1 year? What topic, if any, are PGY-1 residents struggling with in their PGY-1 teaching experiences? 	 Post-workshop survey and end of year survey Document review (resident reflections) 	 TLC preceptors and residents Resident reflections (submitted on LMS) 	 Initiate and create post-workshop and end of year surveys Review resident reflections 	 Survey– descriptive statistics and qualitative (themes) Reflections– thematic analysis
How has the workshop benefited the recipients of PGY-1 residents' education opportunities?	 Immediately post- teaching experience survey given by PGY-1 resident 	 Audience of education (healthcare providers at Mayo Clinic that have worked with PGY-1 residents) 	 Initiate and create post-experience survey 	 Survey– quantitative and qualitative (themes)

Evaluation Questions

Question 1

To what extent does the TLC workshop meet ASHP requirements?

Data Collection Method

Document review of the TLC workshop presentations and quarterly Pharmacademic[™] evaluations will be used to assess how well the TLC workshop meets the ASHP requirements. Two different document reviews will be used to assess the ASHP standards.

Precautions

- a. Data cannot be de-identified.
- b. Preceptor evaluations will be used, and resident progress evaluations reviewed.
- c. Evaluators should take precautions to not include any resident identifiers.

Evaluation Tools

The goal of each presentation in the TLC Workshop is to cover one or more ASHP standards. To properly evaluate whether this occurs during the workshop, the Group developed two evaluation tools.

Document Tool 1

This tool will be used to verify whether the TLC Workshop presentation are meeting ASHP standards by reviewing presentations, specifically goals and objectives, with ASHP Standards.



ASHP STANDARDS VERIFICATION SURVEY

The goal of each presentation in the TLC Workshop is to cover one or more ASHP standards. This tool will be used to verify whether the TLC Workshop presentation are meeting ASHP standards by reviewing presentations, specifically goals and objectives, with ASHP Standards.

PRESENTATION TITLE:	
PRESENTATION TOPIC:	
PRESENTER:	
DATE:	

INSTRUCTIONS

Are the following ASHP standards covered in the TLC Workshop program presentation? Select Yes or No.

ASHP Standard	YES	P NO
R3.1 – Demonstrate leadership skills		
R3.1.2 Apply a process of on-going self-evaluation and personal performance improvement		
R4.1 - Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups)		
R4.1.1 - Design effective educational activities		
R4.1.2 – Use effective presentation and teaching skills to deliver education		
R4.1.4 - Appropriately assess effectiveness of education		

ASHP Standard	YES	P NO
R4.2 - Effectively employs appropriate preceptor roles when engaged in teaching students, pharmacy technicians or fellow health care professionals		
R4.2.1 – When engaged in teaching, select a preceptor role that meets learners' educational needs		
R4.2.2 – Effectively employ preceptor roles, as appropriate		
R4.1.4 - Appropriately assess effectiveness of education		
E6.1 – Demonstrate foundational knowledge of teaching, learning, and assessment in healthcare education		
E6.1.1 – Explain strategies and interventions for teaching, learning, and assessment in healthcare education		
E6.2 – Develops and practices a philosophy of teaching		
E6.2.1 – Develop a teaching philosophy statement		
E6.2.2 – Prepare a practice-based teaching activity		
E6.2.3 – Deliver a practice-based educational activity, including didactic or experiential teaching, or facilitation		
E6.2.4 – Effectively document one's teaching philosophy, skills, and experiences in a teaching portfolio		
Other non-ASHP requirements covered? If yes, please explain in the space provided below.		
		1

Document Tool 2

This tool will be used to conduct quarterly evaluations of ASHP standards.

- 1. Quarterly evaluations, documented in an evaluation software, Pharmacademic[™], will be reviewed to document progress.
- 2. Reports can be exported out of Pharmacademic[™] in an Excel spreadsheet to assess PGY-1 resident progress, which is assessed by the TLC preceptor for that resident.
 - a. Per ASHP standards, 80% of the competencies must be "Achieved for Residency" for the Resident to be considered for completion of residency.
 - b. PGY-1 residents are evaluated using a Likert scale of 1 to 4 and are categorized as
 - i. Needs Improvement
 - ii. Satisfactory Progress
 - iii. Achieved
 - iv. Not Applicable
 - c. Preceptors must include additional comments for any resident scoring less than "Achieved for Residency (ACHR)" as marked by the PGYI director.
- 3. Preceptor comments will be evaluated for keywords, creating a thematic analysis. This evaluation will be conducted on areas PGY-1 residents are successful, as well as areas where success is lacking or needs improvement. This will assist the Group with identifying where the TLC workshop could be impacting resident comprehension, and thus, their overall achievement level.

3.1 - Demonstrate leadership sk	llis
ACHR : Yes	
*R3.1.2 - Apply a process of or	n-going self-evaluation and personal performance improvement
ACHR : Yes	
Needs Improvement (NI)	
Satisfactory Progress (SP)	
Achieved (ACH)	
Not Applicable (NA)	
Comments: No Comments Entered	1
*R4.1.1 - Design effective educ	cational activities
ACHR : No	
*R4.1.1 - Design effective educ	cational activities
ACHR : No	
Needs Improvement (NI)	
Needs Improvement (NI) Satisfactory Progress (SP)	
Satisfactory Progress (SP)	
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments:	
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments:	e to improve upon an already solid foundation. He speaks clearly and engages with the ls.
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need	
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need	ls.
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need *R4.1.2 - Use effective present ACHR : No	ls.
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need *R4.1.2 - Use effective present ACHR : NO Needs Improvement (NI)	ls.
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need *R4.1.2 - Use effective present ACHR : NO Needs Improvement (NI) Satisfactory Progress (SP)	ls.
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need *R4.1.2 - Use effective present ACHR : NO Needs Improvement (NI) Satisfactory Progress (SP) Achieved (ACH)	ls.
Satisfactory Progress (SP) Achieved (ACH) Not Applicable (NA) Comments: Andy's presentation skills continue information provided to their need *R4.1.2 - Use effective present ACHR : NO Needs Improvement (NI) Satisfactory Progress (SP)	ls.

Figure 2. Screenshot of a partially complete Pharmacademic[™] Quarterly Evaluation.

Question 2 (1 of 2)

How effective is the workshop in preparing PGY-1 residents for teaching experiences conducted throughout the remainder of the PGY-1 year?

Data Collection Method

- The survey will be used to measure the efficacy of the TLC workshop as it relates to preparing residents for PGY-1.
- The target audiences will be PGY1-residents and their preceptors.
- The phrasing of the questions will be changed slightly for the preceptors, but the questions will be the same.

Precautions

a. Consent

Verbal consent using a pre-approved script during the TLC workshop will be obtained from the PGY-1 residents. The script will contain information about the evaluation process as a whole and make a statement that the findings will not impact their completion of the TLC program or completing their residency year. TLC preceptors will also have verbal consent obtained at a preceptor meeting; the script will contain information about the evaluation process as a whole and make a statement that the findings will not impact their precepting.

b. Design and Methods

The survey will be administered twice during the residency year. The survey will be sent via email during the last session of the workshop. Residents will need to submit the survey prior to leaving the workshop. We anticipate the survey will take ~10 minutes at most. The preceptors will have 2 weeks to meet with their resident and assess baseline competencies post-workshop then complete the survey. The survey will then be sent out again at the beginning of June via email to both PGY-1 residents and preceptors with completion prior to residency completion (June 30th). In keeping with survey best practices, questions will be written in an unbiased way with appropriate language with single focus questions/items.

Evaluation Tools

Document Tool: Survey

The survey is currently written for Residents.

Section 1: Role selection

- 1. Respondent email: open-ended (to track completion)
 - a. Role in TLC Program: Checklist (resident or preceptor) -- logic to which phrasing for the following questions

Section 2: ASHP Requirements

Respondents will be asked to indicate to which extent they agree or disagree with each statement, in relation to ASHP Standards. Respondents will be a Likert scale of 1 to 5 and are categorized as:

- a. Strongly Agree (5)
- b. Agree (4)
- c. Neutral (3)
- d. Disagree (2)
- e. Strongly Disagree (1)

Section 3: TLC Requirements

Respondents will be asked to indicate to which extent they agree or disagree with each statement, in relation to the TLC Workshop content.

Section 4: Teaching Experiences

Teaching experience questions are used to collect information related specifically to the Resident. Asking such questions can help the Group collect information about the Resident's professional development, their teaching methods and beliefs, best practices, recognition, etc.

The questions in this section of the survey will be open-ended, allowing the Group to collect qualitative answers.

1. Please explain any teaching experience you have prior to starting this residency year.

NOTE: In the end-of-year (EOY) survey, this question will be divided into two separate questions:

- Explain which teaching experience was most beneficial for you and why?
- Explain which teaching experience was least beneficial for you and why?
- 2. What recommendations do you have to improve the TLC workshop?

Section 5: Demographics

Demographic information can help the Group better understand certain background characteristics of a data pool, in this instance, the Resident. In this survey, the Group is collecting demographic information and will unpack the overall results to examine meaningful differences between groups of Residents.

The following questions will be included in this section:

- 1. What is your age range?
 - a. The survey will be broken into age ranges
 - i. 18-24
 - ii. 25-34
 - iii. 35-44
 - iv. 45-54
 - v. 55-64
 - vi. 65, and over
- 2. Are you a traditional PGY-1* resident?

*Did you graduate from pharmacy school in April or May of this year?

- a. This survey question is formatted as a Yes or No question
 - i. If the Resident answers *No*, the survey will provide an additional question, using survey logic, prompting the Resident to enter their pharmacy school graduation date.
- 3. How many years of college did you complete?
 - a. This question will be a two-digit numerical field
- 4. What pharmacy college/school did you graduate from?
 - a. This question is an open-ended text field.
- 5. Do you have an additional degree to your PharmD?
 - a. This survey question is a Yes or No question
 - i. If the Resident answers *No*, the survey will provide an additional question, using survey logic, prompting the Resident to enter any additional degree(s) they have earned



TLC WORKSHOP EFFECTIVENESS

Evaluations track resident progress of the ASHP requirements through the residency year, starting immediately after the TLC workshop. This tool will be used on a quarterly basis, to verify whether the TLC Workshop presentations are meeting ASHP standards.

INSTRUCTIONS

Please indicate to which extent you agree or disagree with the following statements. 5 indicates strong agreement, while 1 indicates strong disagreement with the statement.

Residents: Please complete and submit the survey, prior to leaving the workshop. The survey should take approximately 10 minutes to complete.

Preceptors: Please complete and return this survey to the Group within 2 weeks of the workshop.

SECTION 1. RESPONDENT INFORMATION

EMAIL ADDRESS:					
DATE:					
SELECT YOUR ROLE: R	esident Prec	ceptor O	ther:		
SECTION 2.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
ASHP REQUIREMENTS	5	4	3	2	1
AFTER THE TLC WORKSHO	P, I FEEL I CA	N:			
Apply a process of on-going self-evaluation and personal performance improvement	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Design effective educationa activities	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Edit 7350e: Evaluation and Analytics in Instru	EVALU	JATION PLAN	I: PART 2		
SECTION 2. Ashp requirements	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
After the TLC workshop, I feel	l can:				
Appropriately assess effectiveness of education	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
When engaged in teaching, select a preceptor role that meets learners' educational needs	0	0	\bigcirc	\bigcirc	\bigcirc
Effectively employ preceptor roles, as appropriate	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Explain strategies and interventions for teaching, learning, and assessment in healthcare education	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Develop a teaching philosophy statement	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Prepare a practice-based teaching activity	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Deliver a practice-based educational activity, including didactic or experiential teaching, or facilitation	\bigcirc	0	\bigcirc	\bigcirc	\bigcirc
Effectively document one's teaching philosophy, skills, and experiences in a teaching portfolio	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
SECTION 3. TLC REQUIREMENTS	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
AFTER THE TLC WORKSHOP, I	FEEL I CA	N:			
Present two formal lectures, each lasting a minimum of 30 minutes [Continuing Education (CE)-accredited presentations are preferred]	\bigcirc	0	\bigcirc	\bigcirc	\bigcirc

Edit 7350e: Evaluation and Analytics in Instructional Design			EVALUATION PLAN: PART 2			
SECTION 3. TLC REQUIREMENTS	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1	
After the TLC workshop, I feel I can:						
Provide a multidisciplinary in- service (provide a brief presentation to a healthcare provider audience other than pharmacists, (e.g. physicians, advanced practice providers, nurses, respiratory therapists, etc.)	0	0	0	0	0	
Facilitate a small group discussion	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
Teach using real-world patient case(s)	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
Create a teaching philosophy	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	

SECTION 4: TEACHING EXPERIENCE

Use the box below to explain any teaching experience you have prior to starting this residency year.

Explain which teaching experience was most beneficial for you and why?

SECTION 4: TEACHING EXPERIENCE

Explain which teaching experience was least beneficial for you and why?
SECTION 5: DEMOGRAPHICS
1. What is your age range? 18-24 25-34 35-44 45-54 55-64 65+
 Are you a traditional PGY-1* resident? *Did you graduate from pharmacy school in April or May of this year.
YES NO
3. How many years of college have you completed?
4.What pharmacy college/school did you graduate from?
5. Do you have an additional degree to your PharmD? YES NO
List your degrees:

Question 2 (2 of 2)

What topic, if any, are PGY-1 residents struggling with in their PGY-1 teaching experiences?

Data Collection Method

In addition to the survey, resident reflections will be reviewed for keywords and create a thematic analysis of each experience.

Precautions

a. Consent

Consent and evaluation rationale will be on the introduction page of the survey stating that participation is voluntary and that results will not affect their ability to complete the TLC program or their residency.

b. Design and Methods

Data cannot be de-identified. Evaluators should take precautions to not include any resident identifiers when creating themes.

Evaluation Tools

Document Tool: Document Review

The survey is currently written for Evaluators. Conducting a document review of PGY-1 Resident progress can identify current strengths and weaknesses of each Resident as well as provide insight to areas that need development, individually or as a whole for the TLC Workshop.



ASHP STANDARDS VERIFICATION SURVEY

The goal of each presentation in the TLC Workshop is to cover one or more ASHP standards. This tool will be used to verify whether the TLC Workshop presentation are meeting ASHP standards by reviewing presentations, specifically goals and objectives, with ASHP Standards.

PRESENTATION TITLE:	
PRESENTATION TYPE:	
EVALUATOR:	
DATE:	

INSTRUCTIONS

Indicate which of the following ASHP standards the resident has achieved, based on the reflection of the teaching experience.

		•
ASHP Standard	YES	NO
R3.1 – Demonstrate leadership skills		
R3.1.2 Apply a process of on-going self-evaluation and personal performance improvement		
R4.1 - Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups)		
R4.1.1 - Design effective educational activities		
R4.1.2 – Use effective presentation and teaching skills to deliver education		
R4.1.4 – Appropriately assess effectiveness of education		

		•
ASHP Standard	YES	NO
R4.2 - Effectively employs appropriate preceptor roles when engaged in teaching students, pharmacy technicians or fellow health care professionals		
R4.2.1 – When engaged in teaching, select a preceptor role that meets learners' educational needs		
R4.2.2 – Effectively employ preceptor roles, as appropriate		
R4.1.4 - Appropriately assess effectiveness of education		
E6.1 – Demonstrate foundational knowledge of teaching, learning, and assessment in healthcare education		
E6.1.1 – Explain strategies and interventions for teaching, learning, and assessment in healthcare education		
E6.2 – Develops and practices a philosophy of teaching		
E6.2.1 – Develop a teaching philosophy statement		
E6.2.2 – Prepare a practice-based teaching activity		
E6.2.3 – Deliver a practice-based educational activity, including didactic or experiential teaching, or facilitation		
E6.2.4 – Effectively document one's teaching philosophy, skills, and experiences in a teaching portfolio		
Please provide additional information, to include ASHP standards that were covered but not identified in this survey.		

Question 3

How has the workshop benefited the recipients of PGY-1 residents' education opportunities?

Data Collection Method

The survey will be used to measure perceptions of the audience for the PGY-1 resident's teaching experience. This will be used immediately after each experience.

Precautions

a. Consent

Consent and evaluation rationale will be on the introduction page of the survey stating that participation is voluntary and that results will not affect their ability to complete the TLC program or their residency.

b. Design and Methods

The residents will be asked to add a slide at the end of their presentations with a QR code for the audience to scan or have printed copies of the code or survey pending on the style of teaching. We anticipate the survey will take ~5 minutes at most. In keeping with survey best practices, questions will be written in an unbiased way with appropriate language with single focus questions/items.

Evaluation Tools

Document Tool: Survey

The survey will assess the resident's learning experiences of ASHP standards.

Section 1: Assessment of Learning Experience with ASHP Standards

Respondents will be asked to indicate to which extent they agree or disagree with each statement, in relation to Residents meeting ASHP Standards.

Respondents will be a Likert scale of 1 to 5 and are categorized as:

- a. Strongly Agree (5)
- b. Agree (4)
- c. Neutral (3)
- d. Disagree (2)
- e. Strongly Disagree (1)

Section 2: Assessment of PGY-1 Resident

Respondents will be asked to indicate to which extent they agree or disagree with each statement, in relation to how the Resident conducted their teaching experiences.

Respondents will be a Likert scale of 1 to 5 and are categorized as:

- a. Strongly Agree (5)
- b. Agree (4)
- c. Neutral (3)
- d. Disagree (2)
- e. Strongly Disagree (1)

Section 3: Demographics

Demographic information can help the Group better understand certain background characteristics of a data pool, in this instance, the Resident. In this survey, the Group is collecting demographic information and will unpack the overall results to examine meaningful differences between groups of Residents.

The following questions will be included in this section:

- 1. What is your current* healthcare provider role? *Students: Please select **student** as your current healthcare role.
 - a. This survey question uses a drop-down box.
- 2. How many years have you been practicing medicine?
 - a. This question will be a two-digit numerical field
- 3. What is your primary area of practice*? *Students: Please select **student** as your primary area of practice.
 - a. This survey question uses a drop-down box.



TLC WORKSHOP AND RESIDENT OPPORTUNITIES

This survey will be used to measure perceptions of the audience for the PGY-1 resident's teaching experience. This will be used immediately after each experience.

INSTRUCTIONS

Please indicate to which extent you agree, or disagree, with the following statements. The survey should take approximately 5 minutes to complete and should be completed before leaving today.

RESPONDENT INFORMATION

PRESENTATION TITLE: PRESENTATION DATE: PGY-1 NAME: RESPONDENT NAME:					
SECTION 1. ASSESSMENT OF LEARNING EXPERIENCE	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
This learning experience:					
Had well developed learning objectives	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Met each learning objective	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Was engaging	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Was thought-provoking	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Taught me something new	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Taught me something I will use in practice	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Edit 7350e: Evaluation and Analytics in Instructional Design			EVALUATION PLAN: PART 2		
SECTION 2. ASSESSMENT OF PGY-1 RESIDENT	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
The presenter was able to:					
Design effective educational activities	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Use effective presentation and teaching skills to deliver education	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
When engaged in teaching, select a preceptor role that meets learners' educational needs	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Effectively employ preceptor roles, as appropriate	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Explain strategies and interventions for teaching, learning, and assessment in healthcare education	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Prepare a practice-based teaching activity	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Deliver a practice-based educational activity, including didactic or experiential teaching, or facilitation	0	0	\bigcirc	\bigcirc	\bigcirc

SECTION 5: DEMOGRAPHICS

1. What is your current* healthcare provider role?
*Students: Please select STUDENT as your current healthcare role.
2. How many years have you been practicing medicine?
3. What is your primary* area of practice?

*Students: Please select **STUDENT** as your current healthcare role.

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- Elective competency areas goals objectives 2014 ASHP. (2014). Retrieved February 20, 2022, from https://www.ashp.org/-/media/assets/professionaldevelopment/residencies/docs/elective-competency-areas-goals-objectives-2014
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