2019 - 2020
FY20

RESIDENCY MANUAL
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Each program needs to add an appendix of requirements and expected work products (MUE, project, # journal clubs, # call/staffing hours, required rotations, mention of disease state patient management, etc.) If it is in residency manual, then the offer letter can just refer to the manual

FORMS (AVAILABLE ON THE RESIDENCY U DRIVE)
Resident Project Approval Form
Poster Reimbursement Form
Clinical Specialist On-Call Consult Service Documentation Form (Adult)
Clinical Specialist On-call Consult Service Weekend Sign-Out Information
Pediatric Clinical Pharmacy On-call Report Form
Resident Rotation Schedule Change Request Form
Travel Expense Report
Format for Quarterly Report of Resident
Resident Leave Form
Request for Replacement Time Form
Moonlighting Approval Form
Learning Experience Introduction Form
Residency Program Continuing Education Form
Pharmacy Resident On-Call Food Allowance
Check Out Form
Check Out Form for Returning Residents
Dear Residents:

On behalf of the MUSC Health Pharmacy Residency Program, I would like to welcome you to the Medical University of South Carolina. We are committed to providing outstanding post-graduate residency training programs. We currently have one of the largest and oldest pharmacy residency programs in the country and offer an array of experiences designed to prepare individuals for differentiated roles in pharmacy practice.

The primary emphasis of your residency program will be on the development of practice skills. You will be delegated clinical responsibilities under the preceptorship of an experienced pharmacist to develop these skills. You will be given teaching responsibilities to further refine your communication skills and abilities as a teacher. You will participate in ongoing service activities to further develop your problem-solving skills and your ability to work with others.

Preceptors will establish minimum expectations for your performance during rotations. However, you will be encouraged to surpass these minimum expectations. You will be delegated responsibilities and will be allowed to achieve as much independence as desirable and achievable.

The year ahead of you will be a busy one, but I am confident that you will greatly benefit from the residency program. On a national basis, it is evident that the outstanding practitioners of the future will have completed post-graduate training in addition to their degree in pharmacy. Your investment of time, talent and energy will reap rewards in the future. As the Director of Graduate Pharmacy Education, I am available to help you reach your highest potential. I look forward to working with you and watching your development.

Sincerely,

[Signature]

Heather Easterling, PharmD, MBA
Administrator, Pharmacy Integrated Center of Clinical Excellence
Director, Graduate Pharmacy Education
Residency Program Director, Health-System Pharmacy Administration Residency
Residency Program Structure

The Executive Director of the Medical Center is ultimately responsible for the MUSC Health Pharmacy Residency Program.

The on-going administrative oversight of the program is delegated to the Administrator of the Pharmacy Services Integrated Center of Clinical Excellence (ICCE) for the Medical Center. The on-going operation and coordination of the program is delegated to the Director of the Graduate Pharmacy Education (GPE) and the Associate Director of Graduate Pharmacy Education (representative of the College). Residency Program Directors (RPDs) are responsible for the operation of the individual residency experiences. Residents will also work with preceptors within specific practice areas or areas of expertise.

A Residency Committee, chaired by the GPE director, will serve as a forum to discuss all matters associated with the operation of the program. The committee will guide the RPDs so a consistent program is observed across all specialty areas as is appropriate. Some residency programs may have varying policies based on the nature of the program.
RESIDENCY PROGRAM POSITION DESCRIPTIONS

**Director of Graduate Pharmacy Education** designates the individual responsible for the administration and coordination for all of the pharmacy residency programs.

**Associate Director of Graduate Pharmacy Education** designates a faculty member that (1) serves as the liaison between the College of Pharmacy and Medical Center on issues related to the residency program, (2) collaborates with the Director of Graduate Pharmacy Education on issues related to the administration and coordination of the residency program and (3) acts on behalf of the Director of Graduate Pharmacy Education in his/her absence. Responsibilities are outlined in the associate director of graduate pharmacy education job description (Appendix F).

**Residency Program Director** designates the individual responsible for directing the activities of a particular residency program and is responsible for completion of the Competencies, Goals and Objectives, quarterly development plans and final evaluations.

**Residency Advisor** designates the individual who a Residency Program Director assigns as a personal and/or professional advisor to a resident.

**Preceptor** designates the individual assigned to educate, train and evaluate the resident within their practice area or area of expertise.

**Preceptor-in-Training** designates the individual assigned to educate, train and evaluate the resident within their practice area or area of expertise, but does not meet qualifications for residency preceptor (Appendix C).

**Chief Resident** designates the individual that acts as intermediary between Residency Committee and residents and as a representative of the resident class. Responsibilities are outlined in the chief resident job description (Appendix D).

RESIDENCY COMMITTEE RESPONSIBILITIES

A Residency Committee (RC), chaired by the GPE director, will serve as a forum to discuss all matters associated with the operation of the program. The committee will guide the RPDs so a consistent program is observed across all specialty areas as is appropriate. Some residency programs may have varying policies based on the nature of the program.

**Membership**

The RC will be made up of each RPD from the residency programs, two chief residents, the Director of GPE and Associate Director of GPE and an administrative assistant. Guests may attend to advise the committee on clinical or operational issues relevant to the residents.

**Meeting Times**

The RC will meet monthly and may call additional meetings as needed to address issues as they arise.

EXPECTATIONS AND RESPONSIBILITIES OF RESIDENTS
Professional Practice

Professional Conduct
It is the responsibility of all residents to adhere to the MUSC Health Standards of Professional Behavior policy which may be found at https://horseshoe.musc.edu/~media/files/hr-files/muha-files/policies/policy12standardsofbehavior.pdf?la=en

Professional Dress
All residents are expected to dress in an appropriate professional manner whenever they are in the institution or attending any function as a representative of MUSC Health (including project days). Clean, pressed white lab coats of full length will be worn at all times in patient care areas (excluding Psychiatry and Pediatrics or other areas deemed to be inappropriate by the attending). Any specific problems with dress will be addressed by the resident's Advisor/Program Director. A detailed policy may be found at https://horseshoe.musc.edu/~media/files/hr-files/muha-files/policies/policy8personalappearancedresscode.pdf?la=en and https://horseshoe.musc.edu/~media/files/clinical-files/elinservices-files/pharmacy-files/pnp/b26-departmental-dress-code.pdf?la=en

Employee Badges
MUSC Health Security requires all personnel to wear his/her badge at all times when they are on campus. If the badge is misplaced, a temporary badge is available at the Security stations in the hospitals. If the employee badge is lost, the resident must report the loss immediately to Security, and render a fee for replacement. A detailed policy regarding employee badges may be found at https://www.musc.edu/medcenter/policy/Med/A007.pdf.

Patient Confidentiality
Patient confidentiality will be strictly maintained by all residents. Any consultations concerning patients will be held in privacy with the utmost concern for the patients' and families' emotional as well as physical well-being. A detailed policy may be found at http://www.musc.edu/medcenter/policy/Med/C003.pdf.

Attendance
Residents are expected to attend all work functions on time. All leave requests should be discussed in advance with the involved preceptor to assure that service responsibilities can be fulfilled. Leave requests may be denied based on the needs for delivery of patient care. Rotation Switches: Ideally any changes to the rotation schedule will be made one month prior to the requested change. Forms will be signed by the appropriate preceptors, RPD and resident and submitted to the residency program assistant.

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EXPECTATIONS AND RESPONSIBILITIES OF PRECEPTORS

Pharmacists or non-pharmacists of MUSC Health may participate as preceptors for pharmacy residents. The preceptor must show willingness to precept and be a proficient in the field in which they will teach. Preceptors are expected to give regular feedback to the resident highlighting the resident’s strengths and areas of opportunity. Feedback should be specific and qualitative in nature so the resident may improve his or her performance. Formal evaluations in a timely manner are also mandatory for all preceptors. Preceptors are encouraged to give all formal evaluations no later than the last day of the learning experience or quarterly if the experience is longitudinal. Evaluations should be given at the latest within 7 days of the end of the experience. Preceptors will be expected to meet the criteria outlined by ASHP standards for preceptors.
The Residency Committee requires all preceptors to pursue at minimum 4 hours of education in preceptor development every year. The administrative assistant for the residency program will keep track of the education. At times the RC may hold a preceptor development program to address issues or concerns of the program. The purpose of this requirement is to ensure our preceptors can provide high quality training and education to our residents and to comply with the ASHP accreditation standards. In addition, the RC supports the attendance of our RPDs to the ASHP Preceptor Conference which is held annually (including a day at the Midyear). Attendees should be prepared to share their learnings with the group when they return.

The preceptor standards of professional behavior are listed below in order to enhance the residency learning experience.

Preceptor Standards of Professional Behavior

Respect

• I treat residents and fellow preceptors with respect and courtesy regardless of their position in the hierarchy of the organization.
• I help residents without condescension when they struggle
• I embrace diversity in our residents and preceptors and make a genuine effort of understand their needs
• I respect the privacy, individuality and dignity of residents and fellow preceptors
• I keep interactions positive by not engaging in negative behaviors such as eye rolling, undermining, withholding and infighting.
• I give constructive feedback to residents without attacking personal traits

Excellence

• I welcome new residents and preceptors to our program
• I answer questions posed by residents and preceptors
• I manage up residents and colleagues
• I give constructive feedback to residents without attacking personal traits
• I do my part to ensure that the goals set forth by MUSC Health and the Pharmacy Residency Program are achieved
• I promote interprofessional and interdisciplinary collaboration and understanding.
• I support an environment of continuous improvement, problem solving and learning.

Accountability

• I adhere to the MUSC Health Code of Conduct and apply it to my daily interactions with residents and preceptors
• I demonstrate my fiscal responsibility to the learners I work with
• I take responsibility to ensure my actions, behaviors and decisions reflect positively on MUSC Health and the Pharmacy Residency Program
• I hold myself and the residents that are working with me accountable for providing professional and reliable pharmaceutical care
• I communicate any concerns with residents or fellow preceptors to the Program Director or Director of Residency Programs in an open, honest and constructive manner
• I collaborate with other preceptors to ensure success of the Residency Program
• I acknowledge and respond to email, voicemail, and other forms of communication in a professional and timely manner
• I attend and participate in resident meetings as required
• I give all formal evaluations of residents face-to-face in an open, timely and constructive manner
• I provide the same feedback face-to-face as I document

Adaptability

• I maintain a positive, willing and flexible attitude
• I am receptive to constructive criticism by residents and colleagues I work with
• I embrace change and expect residents’ suggestions for improvement
• I listen to resident’s ideas and incorporate their feedback when possible
• I adapt my teaching style to the learner’s abilities

General Residency Activities

Residents in all residency programs will be required to perform or participate in a number of activities throughout the year. These activities are designed to assure competency with the goals and objectives outlined by the residency accreditation standards. The table below specifies general activities. Requirements which must be met to receive a certificate in the residency program are indicated in a checklist in the appendices. Program Descriptions specific to each program.

<table>
<thead>
<tr>
<th>General Activities</th>
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<tr>
<td>Residents will attend scheduled resident meetings to discuss upcoming resident events, other issues pertaining to the residency program, and actions/recommendations made at residency committee meetings, etc. Meetings will be scheduled by the Director of Graduate Pharmacy Education or the Chief Resident(s).</td>
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<tr>
<td>Be present at a minimum of 80% of departmental staff meetings.</td>
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<tr>
<td>Participate in the teaching activities and evaluate Grand Rounds of the College and Medical Center.</td>
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Resident involvement in teaching activities fosters development and refinement of the resident's communication skills, builds confidence and promotes the effectiveness of the resident as a teacher. Residents may serve as co-preceptors (if deemed appropriate and capable) with faculty members for P4 clerkship students and participate in in-services. Residents will work with and be evaluated by a preceptor. The College of Pharmacy policy on resident teaching is included in the appendix.

Each resident will serve, along with faculty members, in the role of evaluator of student Grand Rounds presentations at least four times each year. This provides the opportunity for residents to improve their evaluation skills. The resident will actively participate in the verbal and written evaluation of the student immediately following the presentation.

Participate in the recruitment efforts of the program.

Each resident will assist with the recruitment efforts of the program. Because each resident is an important source of information and advice for potential candidates, there will generally be some scheduled time within the interview process for interviewees to interact with current residents. Additionally, each resident is requested to spend time providing information to interested parties during the ASHP Midyear Clinical Meeting (if they attend). Residents will be asked to staff the residency showcase and the recruitment suite.
Clinical and Operational Pharmacy Practice

**Goal**

The goal of the clinical pharmacy practice experience is to ensure that each resident can function independently as a pharmacist.

**Description**

I. Each resident will train with a preceptor as assigned. Basic training will take place during the first month of the residency. Returning PGY2 residents may have different requirements for training as decided by the RPD and management team of the department.

II. At the conclusion of the basic training period, the Competency Based Orientation Checklist is expected to be completed. Incoming PGY2 residents are expected to complete the Competency Based Orientation Checklist by the end of the first quarter.

III. Residents will be formally evaluated by their Clinical and Operational Pharmacy Experience preceptors not less than quarterly throughout the year. Feedback will be given continuously.

IV. Each resident will gain clinical experience providing service throughout the year as a clinical pharmacist. The hours required and make up of that service requirement are residency-specific and can be addressed by the Residency Program Director.

VII. Residents are permitted to work additional shifts within the Pharmacy Services ICCE as a temporary MUHA employee for compensation. These shifts must not interfere with any of the resident's rotation or residency requirements or exceed duty hour policies. If a resident chooses to work additional shifts, he/she must inform his/her Residency Program Director and complete a moonlighting form. Residents may not work additional shifts when they are primary clinician on-call for any service and must review these shifts with their rotation preceptor before signing up. The resident should notify their preceptor and RPD if s/he anticipates the possibility of exceeding duty hours as stated by the ASHP. https://www.ashp.org/- /media/assets/professional-development/residencies/docs/duty-hour-requirements.ashx?la=en&hash=5AB546BE4986F74D01BA73A8A89ADD835

**Resident Projects**

Each resident will complete a service or research project during the residency year. The resident will present the results of the project at local, state, regional or national meeting. A manuscript suitable for
submission and publication describing the results of the project must be written.

Residents are provided one working day each month during rotation hours (with the exception of the Clinical Generalist rotation) to work on the project. This time should be requested on the “Learning Experience Introduction Form” during rotation orientation and discussed with the preceptor. Project days may be taken from home or on campus and are counted as one of the 15 working days of each rotation.

**Project selection / Scope of projects/ Approval**

Each year a list of potential projects will be generated by the care team members of MUSC Health. A vetting process will take place to ensure the project is feasible and fits with the organizational goals. The vetting group will be made up of a member of the residency committee, a member of the management team, a departmental expert in analytics and data, and an expert in project design and statistics. The vetted list will be distributed to the residents for ranking. All residents will have an opportunity to review potential projects.

The Residency Committee will recommend a list of potential projects to the Pharmacy Management Team for approval before it is distributed to the residents. Below, a recommended timeline is strongly encouraged. Changes to the timeline can be made with the approval of the project advisor, RPD and resident.

**Process/Timeline**

**July 1 – July 31st** The resident, in conjunction with his/her Residency Program Director, Advisor/Coordinator, and potential project preceptor(s), will identify a project from the list of possible projects provided to the residents. The resident will review the list of projects and meet with the project coordinators of the projects he/she is interested in pursuing. The resident will **rank 3 or more** projects and submit for selection on or around **July 15th**. Once the project is ranked and awarded by the Associate Director of Graduate Pharmacy Education, the Resident Project Approval Form must be completed and signed by the project preceptor and submitted to the RPD by July 31st. The Resident Project Approval Form is located in Box.

**August 20-30** The resident with guidance of the project advisor will present their proposed research project to the Residency Research Oversight Committee. A slide template (provided to the residents) will include a brief background, primary and secondary objectives, project methods, timeline, known barriers, and questions for the committee. Research Oversight Committee is composed of several residency preceptors and aims to use expertise in conducting practice-based research to offer additional guidance to residents.

**By May 1st** Projects should be completed. In the event a project is not completed prior to March 15, sufficient progress must have been made to allow for submission of an abstract to a local, state, regional or national meeting.

**Status Reports**

The project preceptor will complete a criteria-based evaluation on a quarterly basis and the resident will include a progress report in the Quarterly Report of Resident. Residents will present interim updates of
their research project to Research Oversight Committee in December and March in order to gain additional feedback, insight, and assistance throughout the course of their project.

**Project Completion**

The project will be considered complete when the stated objectives have been met to the satisfaction of the project preceptor and Residency Program Director, a manuscript suitable for publication describing the results of the project is submitted to the RPD (due June 1st) and the project is presented at a local, state, regional or national conference. A residency certificate will not be awarded until the project is complete.

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**Resident Presentation Guidelines**

Residents are required to attend 80% of Seminar sessions and residents that arrive more than 10 minutes late will not receive credit for attendance.

**Scheduling of Seminar**

During the orientation period, the dates for Seminar presentations throughout the residency year will be scheduled for each resident under coordination of the Chief Residents. The resident should carefully select their presentation dates around rotation and other residency requirements as to ensure that they will be able to meet all deadlines. RITE and Seminar are not able to be rescheduled unless the resident requests a switch in date due to an unforeseeable circumstance such as a death in the family, or personal emergency, or if discussion has been had with the RPD in a suitable period of time as deemed appropriate by the RPD and RCM. The resident must formally request a switch using the approved form.

**Resident Seminar Requirements**

Each resident will present one formal seminar during the residency program. The goal of the seminar is to expand the resident's communication skills, presentation techniques, and expand knowledge in a topic of their choosing. The seminar topic will be chosen by the resident, with guidance from their RPD and Advisor, and should involve a therapeutic or practice management controversy, developing clinical or practice management research, or therapeutic area. The resident will be responsible for identifying a residency program preceptor to serve as an advisor for their seminar. The resident is responsible for submitting Appendix 4, signed by both the resident and their advisor at least 60 days before their seminar date. The remainder of the deadlines can be found in Appendix 3, Seminar Timeline. Any deviation from this timeline should be reported to the RPD, Advisor, and Projected Advisor immediately upon discovery to discuss any needed plans or support for corrective action.

The resident should refer to the Guidelines for Residents on Development of Effective Pharmacy Continuing Education Programs Document, located in Box. The content of this guide includes:

1) Seminar Speaker Guidance
   a. Selection of a Topic
   b. Selection of an Advisor
   c. Goals and Learning Objectives
   d. Review of Bloom's Taxonomy
   e. Active Learning Techniques
   f. Additional Supplemental Information for developing a CE program
      i. Appendix 1 – Guidelines for Presenters on Development of Effective Pharmacy Continuing
Education Programs

ii. Appendix 2 – Tips for Developing ACPE accredited Learning Objectives
iii. Appendix 3 - Seminar Timeline
   1. Reviews all required deadlines for developing your seminar
iv. Appendix 4 – Expectations of the Resident-Advisor Relationship
v. Appendix 5 – Example Slides
vi. Appendix 6 – Additional Supplementary Resources and Information

2) Seminar Flyer Template
3) Program Info Sheet Template
4) Speaker Disclosure Form
5) PharmAcademic Evaluation Tool
6) APP Evaluation Tool
7) WebEx Instructions
8) Poll Everywhere Instructions
9) Presentation Template (to be used for all Seminars)

The objectives of the Resident Seminar include the following:
1. Critical evaluation of the literature
2. Enhancement of presentation, teaching and communication skills
3. Provision of continuing education for pharmacists and other health care professionals
4. Development of skills in responding to audience questions and comments
5. Familiarization with different audiovisual equipment and techniques

The length of the Resident Seminar will be limited to 45 to 50 minutes. A maximum of 10 minutes and a minimum of 5 minutes must be reserved for questions and/or comments from the audience. The dress code for this lecture is interview attire (suit). No lab coat shall be worn during a Seminar. ACPE requires that some form of interactivity be included in every accredited program. This can be accomplished via case studies, post-test, informal quiz, etc. See Speaker Guideline document for more examples. Each resident will receive feedback from their evaluators and preceptor on the basis of content, presentation style, overall quality, and performance of the applicable RLS objectives for the learning experience. The critique will be discussed with the resident immediately following the presentation.

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Teaching Responsibilities

Teaching responsibilities may include clinical and didactic teaching and/or evaluating for pharmacy students, medical students and residents, hospital personnel, and departmental staff. Teaching activities may involve precepting students on experiential rotations, formal lectures, small group seminars, case studies, in-service presentations, or discussion sessions throughout the residency year. Specific responsibilities will vary by residency and will be agreed upon by the resident and his/her preceptor, Residency Program Director or Advisor/Coordinator. PGY 2 residents may be required to present at a didactic lecture in the College of Pharmacy during their residency year as determined by the RPD. Furthermore, each rotation may have minor teaching responsibilities as designated by the preceptor at the beginning of the rotation. The resident should take an active role in seeking opportunities to participate in teaching activities. The residency preceptor is responsible for communicating to Doctor of Pharmacy students the service and teaching role of the resident. The course coordinator or designee is expected to work with the resident to assure that all classroom lectures are satisfactory. The course coordinator or designee should attend all assigned lectures and critique the presentations to help the resident further develop their teaching skills. An evaluation form should be completed and forwarded to
the Residency Program Director. The College of Pharmacy policy on resident teaching is included in as Appendix B. In addition, pharmacy residents are expected to evaluate four Grand Rounds student presentations.

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**Resident On-Call Responsibilities**

Residents will participate in a Pharmacy On-call Service for evening, holiday, weekend and daytime coverage as needed. Residents will rotate on-call as determined by the service coordinators. When on-call, the resident is responsible for ensuring that all consultations and follow-up (if necessary), are completed. In all cases, therapeutic consults must be reviewed by the clinical back-up before recommendations are made by all PGY1 residents. PGY2 residents, with the approval of their back-up, may give recommendations without a call for each consult. PGY2 residents with approval of the RPD may serve as the backup for PGY1 residents.

Sign outs should be reviewed with the residents on call for the weekend by 5pm on Friday. The format of sign-out and documentation required is determined by each clinical area (i.e. adults, peds, transplant). Residents should review the patients they are signing out with their backups for appropriateness.

Holiday and vacation coverage will be provided by the Pharmacy On-Call Service as determined by the director of that area. Each resident is responsible for arranging coverage with another resident or clinical specialist and for notifying the Clinical Coordinator responsible for the affected call service if changes are made in coverage. The residency administrative assistant should be notified as well to make changes in the on call system. Last-minute schedule changes (except for emergencies) are not acceptable. The holiday call schedule will go by the MUHA holiday schedule; however, residents will be given compensation days based on the holiday schedule.

Examples of on call responsibilities include but are not limited to the following: patient sign outs, pharmacokinetically-dosed drugs, and completing medication reconciliations. The responsibilities may change depending on departmental and hospital needs to provide patient care.

Monthly service (Who’s-On-What) and on-call schedules will be published by the chief residents in advance for all services. This schedule will be distributed to all Pharmacy Services’ care team members. A more detailed description for the Adult, Pediatric, Psychiatric, and Ambulatory On-call Services is available in the On-call policy and procedure and should be referred to for specific questions.

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**Code Responsibilities Attendance**

Residents will attend codes while staffing or working during the Clinical Generalist Rotation. Additionally, if a resident is aware of a code for a patient on his/her service, the resident may attend, which will allow one of the clinical pharmacists to return to other work duties. While attending the code, the resident is expected to assist in medication decision-making and preparation and to work collaboratively with the clinical pharmacist responder. The resident shall obtain ACLS/PALS certification and code bag training during orientation.

**Chief Residents**
A Chief Resident for each class (PGY 1 and PGY 2) will be appointed by the Residency Committee with the input of the resident class. The Chief Resident acts as intermediary between the Residency Committee and residents and as a representative of the resident class. Responsibilities are outlined in the chief resident job description (Appendix D).

**Resident Self-assessment**

Residents complete a self-assessment of their practice experience or competency at the beginning of the residency year as assigned by their RPD. These evaluations should be complete by July 31st or as assigned by the RPD.

**Resident Development Plan**

The RPD and preceptors will customize the training program for the resident based upon an assessment of the resident’s entering knowledge, skills, attitudes, abilities and the resident’s interests. Subsequent modifications may be made throughout the residency year.

- The Resident Development Plan template is completed in PharmAcademic utilizing the resident self-assessment and additional information gained through discussion to address all areas in the development plan template. The development plan template represents the requirements to complete the residency program as indicated in the program description (attached as appendices).
- There must be at least, but not limited to, three goals included in the residents development plan.
- Goals should be specific and have a plan that includes activities that will be used to accomplish resident goals.
- Both the resident and Residency Program Director (and Advisor, if applicable) sign the development plan.
- An electronic copy of the development plan will be posted and available in PharmAcademic.

The goals and plan should be entered into the Resident Quarterly Progress Report and updated on a quarterly basis. Specific comments will be made indicating how the program’s plan has been modified to account for residents’ weaknesses and strengths. The plan will also include reference to the effectiveness of the previous actions.

**Residency Evaluation Procedures**

**Resident's Evaluation of Preceptor and Rotation Experience**

Each resident will complete an evaluation of the preceptor, the rotation experience and a summative self-evaluation of their performance prior to the completion of the preceptor’s resident evaluation and prior to an evaluation meeting. The resident’s summative self-evaluation will include qualitative assessment of their performance focused on strengths and areas for improvement. The preceptor will review the resident’s self-evaluation and include feedback in the resident’s monthly and/or quarterly evaluations that address resident areas of opportunity identified in the resident’s self-evaluation. Additionally, during the monthly and/or quarterly evaluation meeting, the preceptor will provide verbal feedback regarding ways to address resident areas of opportunity identified in the resident’s self-evaluation. The resident will provide their assessment via an electronic and verbal evaluation of the preceptor during the final monthly rotation evaluation. If two consecutive months are spent in a single area with the same preceptor, only one preceptor/rotation evaluation needs be completed for that rotation. For residents spending the entire year with the same preceptor and location, evaluations should be done quarterly. Evaluations are encouraged to be completed on the last day of rotation but no later than 7 days following the end of a
Preceptor's Evaluation of Resident's Rotation Performance

Each preceptor will complete a criteria-based evaluation of the resident after reviewing the resident's LE evaluation, preceptor evaluation and summative self-evaluation. It is encouraged that this be completed on the last day of rotation but no later than 7 days following the end of an experience. If the resident evaluation cannot be conducted in a timely fashion, the issue will be discussed with the preceptor and RPD. The purpose of this evaluation procedure is to ensure an independent evaluation without the bias of the preceptor. An evaluation will be completed by the preceptor at the midpoint.

Definitions:

<table>
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<tr>
<th>Needs Improvement (NI)</th>
<th>Resident displays ≥1 of the following characteristics:</th>
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<tbody>
<tr>
<td></td>
<td>• Requires direct and repeated supervision, guidance, intervention, or prompting</td>
</tr>
<tr>
<td></td>
<td>• Makes questionable or unsafe decisions</td>
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<tr>
<td></td>
<td>• Fails to seek out feedback, incorporate feedback, or is unable to create a sound plan for improvement</td>
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<tr>
<td></td>
<td>• Fails to complete tasks in a time appropriate manner</td>
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<tr>
<td></td>
<td>• Acts in an unprofessional manner</td>
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| Satisfactory Progress (SP) | Resident performs at the level expected for their training. The resident responds to feedback and requires limited prompting and guidance to complete tasks appropriately. Resident can accurately reflect on performance and create a sound plan for improvement. |

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<tr>
<th>Achieved (ACH)</th>
<th>Resident displays ALL of the following characteristics:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Independently and competently completes assigned tasks</td>
</tr>
<tr>
<td></td>
<td>• Consistently demonstrates ownership of actions and consequences</td>
</tr>
<tr>
<td></td>
<td>• Accurately reflects on performance and can create a sound plan for future growth</td>
</tr>
<tr>
<td></td>
<td>• Appropriately seeks guidance when needed</td>
</tr>
</tbody>
</table>

| Achieved for Residency (AchR) *assessed by the RPD only | As determined by the RPD, the resident demonstrates continued competency of the assessed goal and can effectively model and/or teach goal to a learner. |

Formative Evaluations Process

Each preceptor must provide periodic opportunities for the residents to practice and document criteria-based, formative self-evaluation of aspects of their routine performance. Examples of formative evaluations include, but are not limited to: written feedback on notes, in-services/presentations, rotation activities or Objective Structured Clinical Exams (OSCEs). When completed, the resident will upload the information into PharmAcademic.

Longitudinal Evaluation Process

The following longitudinal activities will be evaluated at least once per quarter: Clinical/Operational Service Commitment, Clinic Experience (if applicable), Resident Project, MUE, Manuscript (quarter 3 and 4). The evaluations must be completed within three days of the end of the quarter to allow adequate time for the Residency Program Director/Advisor to incorporate the comments from the evaluations into the resident's quarterly evaluation. In addition, each resident is responsible for performing an independent self-assessment for every longitudinal activity at the same frequency.

Quarterly Evaluations

The Residency Program Director (RPD) will evaluate the resident quarterly based upon the resident's progress toward achieving the criteria-based residency program goals and objectives, individualized goals established by the resident and director at the beginning of the residency year, and overall resident
The RPD is ultimately responsible but may delegate the evaluation process to an Advisor.

The resident will prepare the Resident Quarterly Progress Report with the content specified and self-assess their progress using the criteria-based goals and learning objectives. The RPD will utilize the evaluations completed by preceptors, the resident’s criteria-based self-assessment, the progress report prepared by the resident and other relevant information to (1) complete an assessment of the resident’s progress using the criteria-based goals and objectives and (2) add their assessment of the resident’s progress to the Resident Quarterly Progress Report. Upon completion, the RPD, advisor and resident will meet to discuss progress, plans for the next quarter and review the Resident Quarterly Progress Report.

The Resident Quarterly Progress Report and RPD’s evaluation of criteria-based goals and learning objectives are uploaded into PharmAcademic.

The template used for the Quarterly Progress Report is in Box under the Residency Manual Folder.

**Report Due Dates**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Date Report due to RPD and uploaded into PharmAcademic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Quarter: July 1 - September 30</td>
<td>October 21</td>
</tr>
<tr>
<td>2nd Quarter: October 1 – December 31</td>
<td>January 20</td>
</tr>
<tr>
<td>3rd Quarter: January 1 - March 31</td>
<td>April 20</td>
</tr>
<tr>
<td>4th Quarter: April 1 - June 30</td>
<td>June 22</td>
</tr>
</tbody>
</table>
## Residency Evaluation Responsibilities

<table>
<thead>
<tr>
<th>EVALUATION</th>
<th>METHOD</th>
<th>FREQUENCY</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>RESIDENT</td>
</tr>
<tr>
<td><strong>MONTHLY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotation Midpoint</td>
<td>Narrative</td>
<td>During Rotation</td>
<td>X</td>
</tr>
<tr>
<td>Formative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident Summative Evaluation</td>
<td>Competencies Goals &amp; Objectives</td>
<td>End of Rotation</td>
<td>X</td>
</tr>
<tr>
<td>Preceptor</td>
<td>Rating scale with comments</td>
<td>End of Rotation</td>
<td>X</td>
</tr>
<tr>
<td>Learning Experience</td>
<td>Rating scale with comments</td>
<td>End of rotation</td>
<td>X</td>
</tr>
<tr>
<td>Duty Hour Attestation Form</td>
<td></td>
<td>End of each month</td>
<td>X</td>
</tr>
<tr>
<td><strong>QUARTERLY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Operations Experience</td>
<td>Competencies Goals &amp; Objectives</td>
<td>Quarterly</td>
<td>X</td>
</tr>
<tr>
<td>Clinic Experience (longitudinal)</td>
<td>Competencies Goals &amp; Objectives</td>
<td>Quarterly</td>
<td>X</td>
</tr>
<tr>
<td>Manuscript</td>
<td>Competencies Goals &amp; Objectives</td>
<td>3rd/4th Quarter</td>
<td>X</td>
</tr>
<tr>
<td>Medication Use Evaluation</td>
<td>Competencies Goals &amp; Objectives</td>
<td>as assigned based on resident's development plan</td>
<td>X</td>
</tr>
<tr>
<td>Residency Project</td>
<td>Competencies, Goals &amp; Objectives</td>
<td>Quarterly</td>
<td>X</td>
</tr>
<tr>
<td>Resident’s Development Plan</td>
<td>Narrative and RLS Outcomes, Goals &amp; Objectives</td>
<td>Quarterly</td>
<td>X</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>Competencies Goals &amp; Objectives</td>
<td>End of Orientation</td>
<td>X</td>
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<tr>
<td>Clinical On-call</td>
<td>Competencies Goals &amp; Objectives</td>
<td>End of On-call week (Quarterly for Pediatrics and Psychiatry)</td>
<td>X</td>
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<tr>
<td>Clinical On-call Preceptor</td>
<td>Competencies Goals &amp; Objectives</td>
<td></td>
<td></td>
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<tr>
<td>Seminar Presentation</td>
<td>Competencies Goals &amp; Objectives</td>
<td>After Presentation</td>
<td>X</td>
</tr>
<tr>
<td>Residency Interactive Teaching Experience (RITE) Presentation</td>
<td>Competencies Goals &amp; Objectives</td>
<td>After Presentation</td>
<td>X</td>
</tr>
</tbody>
</table>

Updated June 2019
<table>
<thead>
<tr>
<th>ASHP Entering Interests Form</th>
<th>To be reviewed by RPD during Orientation</th>
<th>July</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering Objective-Based Self Evaluation</td>
<td>To be reviewed by RPD during Orientation</td>
<td>July</td>
<td>X</td>
</tr>
</tbody>
</table>

**FINAL**

<table>
<thead>
<tr>
<th>Final Development Plan update</th>
<th>Narrative and RLS Outcomes, Goals &amp; Objectives</th>
<th>End of April</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residency Program Director/Advisor</td>
<td>Likert-scored questions with comments</td>
<td>End of Program</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Residency Program (All residents participate in a feedback session as well as are given an end-of-year online survey)</td>
<td>Likert-scored questions with comments</td>
<td>End of Program</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Final Year-End Summary (uses same Development Plan document)</td>
<td>Narrative and RLS Outcomes, Goals &amp; Objectives</td>
<td>End of Program</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Information from evaluations may be given to certification boards, credentials/privileging committees. Any information regarding a resident’s performance that is required by federal or state law will be released immediately to the proper authorities.

Top of the Document

**Resident Failure to Progress**

Residents are expected to conduct themselves in a professional manner and to follow all pertinent University, Medical Center and Residency Program policies. Actions taken against a resident are evaluated on a case-by-case basis and the severity of an issue can influence actions (e.g. stealing may result in immediate termination). The intention of this policy to help a resident succeed in the residency program and to clearly redirect the resident so that success can be achieved.

Appropriate action will be taken if a resident fails to:

- Present him/herself in a professional manner
- Follow policies and procedures of the University, College, Pharmacy Services ICCE, or MUSC Health.
- Make satisfactory progress on any of the residency goals or objectives (to be determined by the Residency Program Director (and Advisor, if applicable).
- Make satisfactory progress towards the completion of a residency requirement (rotations, project, manuscript, seminar, etc.)
Failure to Progress Policy

Step 1
When the need for action arises, the involved preceptor [including anyone having contact or involvement with residents and their training], Residency Program Director (and Advisor, if applicable) will:

2. Discuss the issue with the resident.
3. In conjunction with the resident, provide a written document to include
   a. An appropriate solution to rectify the behavior, deficiency or action
   b. A follow-up plan
   c. Specific goals for monitoring progress
   d. Dates for satisfactory progress shall be established with the resident
   e. An outline of next steps if immediate improvement is not seen.
4. The written document will be placed in resident’s file by the RPD and submitted to the Director of Graduate Pharmacy Education. The Medical Center’s Form may be used but there should be an additional written plan developed (described above), which is signed by the resident and RPD at minimum and possibly the preceptor.
5. The Residency Committee and future preceptors will be notified of the resident’s deficiency and will be asked to provide feedback on additional, ongoing or future concerns to the residency advisor and RPD.

Step 2
If the follow-up plan does not yield satisfactory results as described and agreed upon, or another deficiency, behavior or action warrants attention, the involved preceptor(s) plus the resident’s Residency Program Director (and Advisor if applicable) will determine a plan and course of action.

The Residency Committee will be notified of the deficiency, behavior or action under scrutiny, and the follow-up plan and specific goals for improvement. The Director of Graduate Pharmacy Education will appoint a Discipline Advisory Committee (DAC) to provide advice and monitoring to the Residency Program Director (and Advisor, if applicable).

The Discipline Advisory Committee will be composed of three individuals from the Residency Committee, excluding the resident’s Advisor/Coordinator, Residency Program Director or Director of Graduate Pharmacy Education. The Director of the Graduate Pharmacy Education will appoint members to the committee on an as needed basis.

The DAC will review previous actions, interview preceptors, the RPD and advisor and others as related to the case. The DAC may make additional recommendations to the RPD, advisor and resident for next steps in written format. Possible plans may include additional remediation training, additional assignments, additional preceptor review of performance, suspension, or termination.

Step 3
If the resident fails to progress satisfactorily as outlined in Step 2, or if additional shortcomings are identified, the involved preceptor(s) plus the resident’s Residency Program Director (and Advisor, if applicable) will notify the DAC. The DAC will determine a plan and course of action in conjunction with the RPD and advisor (if applicable), up to and including dismissal from the program. The Residency Committee will be notified of the deficiency, behavior, or action, and the follow-up plan and specific goals for improvement.

When and if the Residency Program Director recommends dismissal, the Residency Committee will be convened. The Director of Graduate Pharmacy Education will not be involved in these discussions.
Based on the number, severity, or seriousness of the deficiency, behavior or action, at any time the Residency Committee can be convened to consider a recommendation put forth by a Residency Program Director up to and including dismissal from the Residency Program.

Appeals Procedure:
Residents, as temporary employees of MUSC Health, are not eligible for the Grievance Procedure documented in MUHA Human Resources Policy 44. However, any resident dismissed from the program is eligible to appeal their termination to the Administrator of Pharmacy Services if they believe the appropriate procedures were not followed. If a resident wishes to appeal the following steps should be taken:

1. Within five (5) calendar days of the employment action, the resident must submit a letter to the Administrator outlining how the above Failure to Progress steps were not followed and any additional relevant documentation. This time frame cannot be waived. If the letter is not submitted within five (5) calendar days of the effective date of the adverse employment action, then the appeal will be deemed untimely and will be denied. No further action will be taken.
2. Upon receipt of the complete letter outlining how the proper Failure to Progress steps were not followed, the Administrator will review the appeals letter. The Administrator will render a final decision within 7 calendar days of receipt of the appeal.
3. If the Administrator determines that the proper steps to dismiss the resident were not followed, the resident will be offered to continue their residency program. Due to the nature of residency programs and the requirements for RPDs, the same RPD will be assigned to the re-admitted resident. Whenever possible, however, a different advisor may be assigned.
4. If the resident is readmitted to the program, they will automatically be in Step 2 of the above Failure to Progress process.

GENERAL INFORMATION

Qualifications of Resident Applicants

Applicants must possess a Doctor of Pharmacy degree from an ACPE-accredited college or school of pharmacy or have patient care experience equivalent to a PharmD degree and must be eligible for licensure as a pharmacist in the State of South Carolina. Applicants for PGY 2 residencies will have completed or be enrolled in a PGY 1 residency. The resident must submit a copy of their PGY1 certificate on the first day of the PGY2 residency. The Administrative Coordinator will verify the completion of the program at the resident’s PGY1 institution. A 24-month residency (1) in which the PGY 1 requirements are completed during the 24-month period, or (2) in which the PGY 1 requirements are completed in year one and PGY 2 requirements are completed in year two may be offered.

Selected applicants for all programs will be required to visit the Medical University of South Carolina campus for an on-site interview. Phone or online interviews may be granted in some circumstances (e.g., Phase 2 match). Candidates are selected for interviews based on criteria approved by the Residency Program Committee.

Applications are accepted via PhORCAS and the application deadline is December 31. Programs may interview qualified applicants with complete application files after October 1.
Application materials must include the following:

- Application form
- Letter of intent
- Curriculum Vitae
- Official transcripts of all professional pharmacy education
- Class rank (may be uploaded in to PhORCAS or submitted in a sealed envelope from Dean's Office) may be required by some programs
- Three letters of reference completed by health professionals who can attest to the applicant’s practice abilities and aptitudes.

Early Decision for PGY2 Programs
Residents wishing to apply for a PGY2 Program at MUSC Health may do so under the early admissions process if the RPD of the PGY2 Program wishes to offer the option. Applications for an early admission should be discussed with the PGY2 RPD as early as possible. If the RPD agrees to accept early admission candidates, application materials listed below must be submitted by 5:00pm November 1st. The RPD will review all early admission candidates and select those for interview by November 15th. Interviews for the PGY2 position will occur between November 16th and December 15th at a mutually agreeable date and time for the RPD and candidate.

Application materials must include the following:

- Application form
- Letter of Intent
- Curriculum Vitae
- Three letters of reference completed by health professionals who can attest to the applicant’s practice abilities and aptitudes.

Residency Benefits
a. Resident Stipends: Assessed annually and communicated in welcome letter.
b. Leave as outlined in the Leave Policy section below.
c. Health Insurance: Health insurance (medical and dental) is available on a group rate basis; options can be viewed at: http://academicdepartments.musc.edu/hr/university/
d. Parking: Available for a monthly charge.
e. Taxes: Federal, State and F.I.C.A. taxes will automatically be deducted from paychecks.
f. Poster Reimbursement: The MUSC Health Residency Program will have posters printed for each resident that presents at an educational and professional meeting as long as the resident uses the approved poster template. The Residency Program Administrative Coordinator will arrange for the poster to be printed (3 feet by 5 feet in color).

Leave Policies
ALL LEAVE must be approved by the preceptor and RPD. A preceptor or RPD can deny any leave based on patient care concerns or if the resident’s ability to complete the assignments of the rotation is in question.

PGY1 residents receive leave as follows:

- 15 days of paid leave which is used for sick time, vacation time, holidays and interview days.
- Administrative time is granted upon approval for professional leave for meetings or other duties as determined.
- Each PGY1 resident will receive one paid time off day per month (10 total days) after their Clinical
Operations Experience (with exception on Clinical Generalist rotation as the day is built into the schedule).

- Residents working on the designated holidays will not take paid leave. A holiday schedule is included in this section of the Residency Manual.
- Total days of paid leave is 25 days with additional administrative leave as approved.

PGY2 residents and PGY1 Community resident(s) receive leave as follows:

- 23 days of paid leave which is used for sick time, vacation time, holidays and interview days.
- Administrative time is granted upon approval for professional leave for meetings or other duties as determined.
- Residents working on the designated holidays will not take paid leave. A holiday schedule is included in this section of the Residency Manual.

Annual Leave
Requests for annual leave are made using the Resident Leave Form. All applicable sections of the form must be completed. This completed form should be submitted for approval first to the assigned preceptor for that time at least one week prior to the desired date of absence. The primary preceptor will then approve leave time requests based upon availability to ensure adequate coverage of pharmacy service responsibilities. The leave request form will then be submitted to the Residency Program Director for approval. Leave forms will be reviewed by the RPD and Director of Graduate Pharmacy Education. A resident must work a minimum of 15 days on each one-month rotation (this includes the project day). A copy of the leave request form will be returned to the resident. The resident will then turn the completed form to the departmental administrative assistant.

If a resident needs to take day(s) of sick leave, the resident must speak directly to the preceptor and the residency administrative assistant must be directly contacted. Leaving a message on voice mail or through the paging system is not considered adequate contact. The residency administrative assistant will assure the resident has turned in a Resident Leave Form. If a resident is absent for three or more consecutive days, a doctor's excuse is necessary.

Administrative Leave
Administrative leave may be used for attendance at an educational/professional meeting only. Administrative leave CANNOT be used for interviews. Requests are made using the Resident Leave Form. All sections of the form must be completed. The form should be submitted to the preceptor, the RPD, administrative assistant and Director of Graduate Pharmacy Education for approval in that order. All travel requests for educational meetings and/or funding should be turned in to the residency administrative assistant at least 3 weeks prior to travel (with brochure and reason for attending). All expenditures for professional leave must be verified by submission of receipts. All travel reimbursement must be submitted within 30 days after the time of travel. Failure to complete these tasks by the deadline may result in funding not being granted. All funding is based on the budget feasibility of the program and may vary from year to year.

Long Term Leave

Long term leave may be taken as sick leave, annual leave and/or leave without pay. The duration of total long-term leave shall be approved by the RPD and Director of Graduate Pharmacy Education. Additional time without pay may be requested and granted at the discretion of the Director of Graduate Pharmacy Education and with approval of the Residency Program Director. The resident will be required
to "make-up" time missed in accordance with Residency Program requirements. Maximum long term leave is 8 weeks.

**Duty Hours**

The MUSC Health residency programs follow the Pharmacy Specific Duty Hours Requirements For the ASHP Accreditation Standards for Pharmacy Residencies. See https://www.ashp.org/-/media/assets/professional-development/residencies/docs/duty-hour-requirements.ashx?la=en&hash=5AB546BE4986F74D01BA73A8A89ADDB164AA7635.

**Resident Holidays (9)**

<table>
<thead>
<tr>
<th>New Year's Day</th>
<th>Memorial Day</th>
<th>Independence Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Day</td>
<td>Thanksgiving Day</td>
<td>Day after Thanksgiving</td>
</tr>
<tr>
<td>Christmas Eve</td>
<td>Christmas Day</td>
<td>Day after Christmas</td>
</tr>
</tbody>
</table>

Additional declared holidays may be granted at the discretion of the Director of Graduate Pharmacy Education.

Residents will use paid leave for all designated holidays. If the resident is scheduled to work on the holiday, they will NOT take paid leave.

Residents will be scheduled to work in the area(s) in which they have trained. Every effort will be made to coordinate this with the on-call schedule so that residents are not scheduled for more than one major holiday. These schedules will be made as early as possible and it is the responsibility of the resident to trade weekends if necessary. Residents scheduled to be on-call or those completing their clinical operational experience on a holiday will NOT take paid leave.

**Electronic Residency Documents**

Residents are required to maintain a record of residency documents for the duration of the residency. All forms and documents will be uploaded into PharmAcademic or in the tool designated by the RPD of the program.

Electronic Resident binders or PharmAcademic should be updated monthly throughout the residency year. The following documents are required to be uploaded to the resident binder:

- Resident *Curriculum Vitae*
- Resident Academic and Professional Record
- Drafts and completed assignments and presentations throughout the year (e.g., Seminar, RITE, Lectures, On-Call Experiences, Manuscript, MUE, P&T, Kinetics). Any documents that highlight the learning experience of the resident (e.g., business plans written, chart notes, posters, abstracts, memos).
- Examples of formative feedback
Pharmacist Licensure for Residents

All residents must be licensed by the South Carolina Board of Pharmacy by July 1. Information on the licensure process may be accessed at www.llr.state.sc.us/POL/Pharmacy. Questions regarding licensure may be addressed to the Director of Graduate Pharmacy Education or directly to the South Carolina Board of Pharmacy.

South Carolina Board of Pharmacy
P.O. Box 11927
Columbia, SC  29211-1927
Telephone:  (803) 896-4501
Fax: (803) 896-4596

Residents who have not received their license by August 31 will have their participation in the residency program reviewed and may be subject to dismissal. Dismissal will occur depending on the number of times licensing exam(s) were taken and the commitment of the resident to re-take their exam. If the resident is not licensed by September 30, the resident will be dismissed. If the resident has failed their licensing exams (law or NAPLEX) 3 times, they will be dismissed.

Extenuating circumstances may be evaluated and if there is a decision made to continue the residency, the resident’s length of program will be extended to ensure that two thirds of the residency is completed as an appropriately licensed pharmacist. Making up time in the clinical operations experience and the clinical on call experience will be required and will be discussed with the RPD and resident.

External Employment Policy

The responsibilities of the resident do not coincide with the normal 8:00 AM to 5:00 PM scheduled forty-hour work week. In many instances, odd hours of coverage (e.g., weekends, evenings or early mornings) are necessary to ensure high quality of pharmacy services to the patients of MUSC Health. Fluctuations in workload, cross-coverage, change of service, unusual service demands, meetings or patient loads, on-call, etc. may all dictate the hours of resident service.

External employment, if sought, should be carefully chosen to accommodate variation in service responsibilities to MUSC Health, the resident's primary priority. Working additional hours for MUHA is considered outside employment. All outside employment must be approved by the Residency Program Director and Director of Graduate Pharmacy Education. Additionally, any moonlighting must also be approved by the rotation preceptor before the resident commits. Professional liability insurance provided by the residency program does not cover the resident for additional outside employment. Successful completion of the residency program is a function of successful completion of all the program's requirements, which dictate the primary schedule of the resident. According to ASHP standards, residents may not exceed 80 hours worked per week, averaged over a four-week period. Residents are permitted to work additional shifts within Pharmacy Services as a temporary MUHA employee for compensation. These shifts must not interfere with any of the resident’s rotation or residency requirements. If a resident chooses to work additional shifts, he/she must inform his/her Residency Program Director and complete a moonlighting form. Residents may not work additional shifts when they are primary clinician on-call for any service and must review these shifts with their rotation preceptor before signing up. The resident should notify their preceptor and RPD if s/he anticipates the possibility of exceeding duty hours as stated by the ASHP. https://www.ashp.org/-/media/assets/professional_development/residencies/docs/duty-hour-requirements.ashx?la=en&hash=5AB546BE4986F74D01BA73A8A89ADDB164AA7635
Use of Technology

Residents will be provided a laptop that will serve as the computer for their office space and will be available for use while performing patient care activities. The laptop will be signed out at the beginning of the residency year and will be returned to the Administrative Coordinator at the end of the residency year. Residents will be held financially responsible for their assigned laptops (in case of loss, breakage due to neglect, etc.).

The resident is responsible for the care and security of the device and upholding data security per the Pharmacy Services Computer Use Policy; policies and procedures of Information Systems (IS) (http://www.musc.edu/infoservices/policies.html).

Use of smartphones, tablets, or other devices is allowed in accordance to the policies and procedures from the Information Solutions.

DEPARTMENT OF CLINICAL PHARMACY AND OUTCOME SCIENCES

Coursework Available to Residents

Residents interested in lecturing in the classroom should notify the faculty member presenting the lecture of interest. Residents interested in facilitating clinical assessment, hospital or community laboratories should notify the course coordinator of the particular lab of interest.

Any participation in coursework during scheduled rotation hours must be approved in advance by the rotation preceptor.

MEDICAL UNIVERSITY OF SOUTH CAROLINA LIBRARY

The primary purpose of the Medical University Library is to meet the information needs of faculty, staff, residents and students, and to support the curriculum, research, and patient care goals of the University and the Medical Center. The Library is located on the second floor in the Education Center/Library Building. It has an extensive collection of books and journals and provides access to eBooks, eJournals, Knowledge Bases, and other databases. Library resources can be accessed via the internet at http://www.library.musc.edu.

PHARMACY SERVICES

Mission

The Mission Statement of MUSC Health Pharmacy Enterprise is to work collaboratively with other healthcare professionals to provide optimal pharmaceutical care to all patients, to advance pharmaceutical knowledge through educational and scholarly activities, and to promote positive patient outcomes.

Vision

The MUSC Health Pharmacy Enterprise will provide optimal patient care and improve patient outcomes for the lives we touch. Pharmacy team members will work together to create an exceptional work environment and advance the profession of pharmacy through outreach and
accessibility. The enterprise will be recognized locally, nationally and globally for quality and diversity, professional leadership, educational excellence, and innovation.

**Administration**

<table>
<thead>
<tr>
<th>Preceptor</th>
<th>Area of Practice</th>
<th>Phone</th>
<th>Pager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Heather Easterling</td>
<td>Administration, ICCE Administrator</td>
<td>2-5691</td>
<td>13300</td>
</tr>
<tr>
<td>Dr. Jeff Brittain</td>
<td>Administration, Director of Pharmacy Support Services</td>
<td>2-4682</td>
<td>11599</td>
</tr>
<tr>
<td>Dr. Kelly Crowley</td>
<td>Administration, Director of Ambulatory Services</td>
<td>2-1009</td>
<td>12944</td>
</tr>
<tr>
<td>Dr. Joel Melroy</td>
<td>Administration, Director of Inpatient Pharmacy Services</td>
<td>6-5933</td>
<td>11732</td>
</tr>
<tr>
<td>Ms. Dawn Rooke, MBA</td>
<td>Administration, Director of Business Operations</td>
<td>2-6844</td>
<td></td>
</tr>
</tbody>
</table>

**Administrative Support**

<table>
<thead>
<tr>
<th>Staff</th>
<th>Area of Responsibility</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Stephanie Mackey</td>
<td>Administrative Assistant, Residency Program</td>
<td>2-7626</td>
</tr>
<tr>
<td>Ms. Susan Sykes</td>
<td>Dr. Easterling’s Executive Administrative Coordinator</td>
<td>2-5691</td>
</tr>
<tr>
<td>Ms. Andrea Sanna</td>
<td>Administrative Assistant</td>
<td>2-2665</td>
</tr>
</tbody>
</table>

**Pharmacy Web Page**

The Pharmacy Services web page is available at the following URL: https://horseshoe.musc.edu/clinical/clinservices/pharmacy/.

**Residency Completion**

Residents completing all requirements noted in the checklist located in the Program Description for the resident’s program will receive a residency certificate on the last business day of June. Residents may be asked to participate in follow-up surveys after completion of the program. These surveys may request information regarding evaluation of the program as preparation for practice, practice demographic/profiles and satisfaction data.
Appendix A
Academician Preparation Program

The College of Pharmacy offers an optional certificate to residents throughout the Charleston area who are interested in enhancing skills needed in an academic environment. Residents are assigned a full-time faculty member as their mentor for this program. Many of requirements for this certificate are already present in many residency programs. Listed below are the details.

Goals and Objectives
The purpose of the College of Pharmacy’s “Academician Preparation Program (APP)” is to prepare pharmacy residents to serve as educators, either in full-time or adjunct faculty positions.

Upon completion of the program, the resident should be able to:
- Describe the responsibility of pharmacy educators
  - Describe different teaching environments
  - Define scholarship
  - Develop a teaching portfolio
  - Understand the differences among various types of faculty positions for practice, teaching, scholarship and service
- Demonstrate use of varied teaching methods
  - Compare and contrast various teaching methods used in unique learning settings (for example, small group facilitation vs. large classroom didactic lecture)
  - Understand and, when appropriate, utilize principles of active learning
- Evaluate student performance
  - Demonstrate skill in constructing multiple choice exam questions
  - Provide constructive feedback for a defined learning experience
  - Demonstrate the characteristics of an effective role model when engaged in activities with pharmacy students
  - Employ effective preceptor strategies for motivating pharmacy students

Learning Activities/Requirements
1. Develop a teaching portfolio
   - Include your teaching philosophy, and goals for APP. This portfolio will contain all of your learning activities and evaluations. This will need to be turned into your mentor to review prior to completion of program. This will need to be completed by June 1st.

2. Each resident will be assigned a faculty mentor from the MUSC College of Pharmacy to work with during the year. They will review experiences used to fulfill learning activities and evaluate the residents’ progress.
   - Residents and mentors will meet three times per year (mid-August, early-January, and late May.

3. Attend 100% of academic seminar series
   - Residents need to attend the seminar series. Some will be live, others will recorded and housed in Harbor and may be viewed at the resident’s leisure.
   - Successful completion of the Research Certificate Program is required.

4. Provide two contact hours of didactic lecture
   - Lectures should utilize active learning methods.
• Lectures may be completed in college courses or the institution where the resident practices.
• Mentors or a designee will evaluate the residents’ lectures.
• Lectures completed at institutions as part of their residency requirement can meet this requirement.
• The resident will need to have the following information in their portfolio:
  1. Presentation title, date given
  2. Audience (~ number that will attend)
  3. Final slide set
  4. Final evaluation forms (copy of each form received)
• All resident seminar presentations will be evaluated utilizing the same APP evaluation form. Mentors or their designee will evaluate the residents.
• All lectures must have at least five multiple choice test question per hour of lecture that evaluate the learner’s comprehension/application of the material. The test questions should be mapped to the learning objectives, ACPE topics, Blooms taxonomy, disease/system and CAPE outcomes. The preceptor that the resident is working with should review these.
• The questions/answers with explanation and mapping should also be emailed to Dr. Jean Nappi (nappijm@musc.edu)

5. Develop one complex patient case with a facilitator’s guide. This case may be used as a lecture in a didactic course (ie; clin apps) or used to facilitate a small group.

6. Facilitate five small group discussions and/or laboratory exercises
   • These sessions are designed for the resident to evaluate student presentations or other skills.
   • At least one facilitation must be in a laboratory or clinical assessment course. Many of these use small group facilitation and residents may become more familiar with additional educational techniques including OSCEs using standardized patients and human patient simulation.
   • Many can be completed at the resident’s practice site; however, each experience used for small group facilitation needs to be approved by your mentor prior to performing. Examples of small group opportunities include but are not limited to: pharmacy student disease state discussions, pharmacy student patient case presentations, or helping in one of the laboratory based courses in the college. If the mentor is not able to evaluate the resident, another preceptor must be identified.
   • All small group facilitations will be evaluated utilizing the same evaluation form. Mentors or preceptors will evaluate the residents performing small groups facilitations. If residents choose to perform activity at their practice site, a preceptor must agree to evaluate.

7. Precept pharmacy students during two (month long) rotations
   • A preceptor at the resident’s institution needs to agree to allow the resident to assist precepting the student. Minimum requirements for this interaction include: providing an orientation to the student for the month-long experience, review patients and discuss disease states and drug therapies, evaluate student-team interactions, and evaluate student-patient interactions. Must be able to perform verbal and written midpoint and final evaluations along with the student’s preceptor.
   • Provide written evaluation of pharmacy students at midpoint and final using the evaluation form on evalue.

8. Evaluate at least four pharmacy student oral presentations (examples include but are not limited to: pharmacy student seminar or Grand Rounds presentations, clinical applications presentations)

9. Prepare a manuscript suitable for peer review and publication
• This can be completed with preceptors from the resident’s practice site; however, it needs to be reviewed and approved by your mentor. It must meet these minimum requirements:
  a. Publication subject is of appropriate depth / scope and is relatable for the respective postgraduate year of training
  b. The publication should be suitable for submission to a peer review journal

10. Prepare an abstract suitable for submission for a professional meeting on a local, state or national level
  • The abstract can be written with other preceptors; however, it will need to be included in your portfolio. The abstract must include results and conclusion.


Residents will have until June 1st to complete the program. Any extensions will have to be approved by the APP executive committee.
Appendix B

DEPARTMENT OF CLINICAL PHARMACY & OUTCOME SCIENCES
POLICY
RESIDENT TEACHING IN THE PROFESSIONAL CURRICULUM

Providing teaching opportunities for pharmacy residents is encouraged as a method to foster professional development, acquire teaching skills, and assist residents in earning the Academic Preparation Certificate from the College of Pharmacy. As a rule, residents may participate in clinical and/or didactic teaching. In each case/teaching event, a faculty member who will be responsible for the resident’s performance must be identified. In general, this will be the faculty member of record/responsible for a given clerkship, didactic class, laboratory, or small group session. The duties/expectations of the responsible faculty member are as follows:

1. Assist the resident in preparing for the teaching session. In the case of didactic lectures, laboratories, and small group sessions, this includes:
   a. ensuring that the resident is fully aware of the objectives of the session, what material is to be covered, and what level of detail/depth is expected
   b. ensuring that the content prepared by the resident is appropriate
   c. confirming that all handout material is acceptable in format and content
   d. ensuring that the resident is fully capable in the use of any audiovisual equipment to be used during the session
   e. attending the session in its entirety to provide content expertise as necessary
   f. reviewing/revising examination questions prior to and after the exam
   g. providing the resident with a structured evaluation of performance/feedback after the class session

2. In the case of clinical teaching, the faculty member is expected to:
   a. clarify for the resident exactly what teaching opportunities/responsibilities are entailed (ongoing throughout clerkship and ad hoc)
   b. observe an adequate amount of teaching so that meaningful evaluation/feedback on teaching technique can be provided to the resident
   c. ensure opportunities for the resident to provide written feedback to students in the clerkship student evaluation process
   d. solicit input from students regarding the quality of resident’s teaching such that this may be reflected in this component of the resident’s clerkship duties.
Appendix C

MENTOR PROGRAM FOR PRECEPTORS IN TRAINING

Objective: The pharmacy residency mentor program is designed to allow new preceptors who have not yet met the qualifications for residency preceptor (also known as preceptors-in-training) the opportunity to work with more senior clinical specialists/preceptors in order to gain additional knowledge and skills and become proficient at precepting pharmacy residents within two years.

It is expected that mutual benefits will be derived from the relationship between mentor and mentee and that no conflicts of interest will exist. Although the program is formally designed for the first year of precepting, the hope would be that these relationships continue long-term. Mentors/mentees will be assigned by the Residency Program Director based on the advanced practice area after discussion with potential preceptors. In the event that a mentor leaves MUSC Health or job functions change significantly, changes will be made accordingly so that there is continuity for the mentee.

Expectations of Mentor: As a role model, the mentor will teach, sponsor, encourage, counsel and befriend a less experienced/skilled person for the purpose of promoting their professional development in the area of resident precepting. Mentors will be expected to utilize interpersonal skills in order to aid individuals in growth and development. Specifically, the mentor will be expected to:

- Review and sign the mentee’s preceptor-in-training development plan
- Co-sign any summative evaluations completed by the preceptor-in-training
- Meet with the mentee:
  - At the beginning of the first month of precepting (or at commencement of the mentor program) and observe the orientation process
  - At the end of the first month of precepting and observe the evaluation process
  - At least twice per year in order to review the development plan and follow up on precepting progress, growth/development
- Be available to the mentee at any time during rotation experiences, when questions arise or advice is needed
- Evaluate at least one teaching experience that the mentee facilitates throughout the year

Expectations of Mentee: As a protégé, the mentee will be open-minded and proactive when it comes to meeting with their mentor and will be expected to self-assess throughout the process. Mentees will be expected have a willingness to assume responsibility for their own growth and development, with aid from their mentor. Specifically, the mentee will be expected to:

- Complete preceptor-in-training development plan outlining progress towards meeting all ASHP requirements within 2 years
- Meet with the mentor:
  - At the beginning of the first month of precepting/orientation process (or at commencement of the mentor program) and be receptive to feedback/constructive criticism
  - At the end of the first month of precepting/evaluation process and be receptive to feedback/constructive criticism
  - At least twice per year in order to review the development plan and follow up on precepting progress, growth/development
- Proactively contact the mentor throughout the year when questions arise or advice is needed
- Update the ASHP Academic and Professional Record (APR) yearly
## Pharmacy Residency Program
### Preceptor-in-Training Development Plan

<table>
<thead>
<tr>
<th>Preceptor-in-training name:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentor name:</td>
<td></td>
</tr>
</tbody>
</table>

#### PGY1 Learning Experience(s)

#### PGY2 Learning Experience(s) and Program(s)

**Other learning experiences**
- [ ] On-call
- [ ] Medication Use Evaluation
- [ ] Seminar
- [ ] Research Project
- [ ] RITE
- [ ] Other:

<table>
<thead>
<tr>
<th>Preceptor-in-training eligibility</th>
<th>PGY1 Eligibility</th>
<th>PGY2 Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the applicable level of experience</td>
<td>□ PGY1 + 1 year of practice experience</td>
<td>□ PGY2 + 1 year of practice experience in advanced practice area</td>
</tr>
<tr>
<td></td>
<td>□ PGY1 + PGY2 + 6 months of practice experience</td>
<td>□ ≥ 3 years of practice experience in advanced practice area</td>
</tr>
<tr>
<td></td>
<td>□ ≥ 3 years of practice experience</td>
<td></td>
</tr>
</tbody>
</table>

**Preceptor-in-training responsibility**
The preceptor-in-training agrees to:
- [ ] contribute to the success of residents and the program
- [ ] provide learning experiences in accordance with Standard 3
- [ ] participate actively in the residency program’s continuous quality improvement processes
- [ ] demonstrate practice expertise and preceptor skills and strive to continuously improve
- [ ] adhere to residency program and department policies pertaining to residents and services
- [ ] demonstrate commitment to advancing the residency program and pharmacy services

**Preceptor-in-training qualifications**
- [ ] Complete Academic and Professional Record Form 2019
- [ ] Use four clinical teaching roles (instructing, modeling, coaching, and facilitating) at the level required by residents
- [ ] Ability to assess residents’ performance
- [ ] Recognition in the area of practice for which they serve as preceptor
- [ ] Active practice in the area of practice for which they serve as preceptor
- [ ] Maintenance of continuity of practice during residents learning experience
- [ ] On-going professionalism, including a personal commitment to advancing the profession

**Initial Preceptor Development Plan**

*Addresses how preceptor-in-training plans to meet current preceptor eligibility,*
**responsibility, and qualifications requirements by the end of the preceptor-in-training period. Document any preceptor development related activities.**

| Progress toward meeting eligibility, responsibility, and qualifications requirements | Q1 Update:  
Q2 Update:  
Q3 Update:  
Q4 Update: |
| Mentor comments | Q1 Update:  
Q2 Update:  
Q3 Update:  
Q4 Update: |
| RPD Comments | **PGY1 Program:**  
☐ Preceptor-in-training has fulfilled all qualifications for becoming a preceptor  
Date:  
Comments:  

**PGY2 Program:**  
☐ Preceptor-in-training has fulfilled all qualifications for becoming a preceptor  
Date:  
Comments: |

The completed development plan should be uploaded to the PIT’s “My Portfolio – Continuing Professional Development” in PharmAcademic.

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Appendix D

JOB DESCRIPTION
Job Code/Title: Chief Resident, Pharmacy

JOB PURPOSE

Acts as intermediary between Residency Committee and residents and as a representative of the resident class. Schedules and organizes various residency class activities.

JOB FUNCTIONS

1. Representing residents and serving as voting members of the Residency Committee
2. Take minutes the RCM and distribute approved minutes to the committee members and residents
3. Assisting in the scheduling and coordinating of Seminar and Resident Interactive Teaching Experiences (RITE). Sending out morning emails and pages as reminders for these conferences to include the subject, presenter, time and location.
4. Scheduling and coordinating resident meeting and meetings with the Director of Graduate Pharmacy Education
5. Compiling the Who’s on What document and disseminating it monthly
6. Disseminating information of interest to all residents and coordinating resident activities
7. Representing residents at departmental and university functions.
8. Providing leadership and motivation to all residents as a colleague in clinical practice.
9. Coordinating the residency trip and visits from other residency programs.
10. Coordinating resident participation in the recruitment process at the ASHP Midyear Clinical Meeting
11. Coordinating the MUSC Health Pharmacy Research Showcase.
12. Responsibility for sign-in sheet at resident interactive teaching experience (RITE) and seminar. Sign-in sheet should be forwarded to the Administrative Coordinator.
13. Coordinating and facilitating a residency retreat to obtain feedback regarding the residency program, prior to the revision of the Residency manual. The results of these retreats are to be presented to the residency committee.
14. Coordinates nominations and the decision on the winner of the Preceptor Award.
15. Completing a Resident Alumni Newsletter annually
16. Other duties as assigned

MINIMUM JOB REQUIREMENTS

PGY1 Chief Resident: Must be currently completing a PGY1 residency at MUSC Health
PGY2 Chief Resident: Must be currently completing a PGY2 residency at MUSC Health

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED

- Ability to communicate effectively, both orally and in writing
- Skill in organizing participation in meetings and visits with other programs
- Skill in examining and implementing new strategies and procedures
- Ability to exercise leadership skills within the pharmacy department and among peers

EVALUATION
The chief residents will be evaluated yearly by the GPE and/or the Associate GPE. The evaluation will take into consideration feedback from the residency class on the performance of the chief residents.
JOB DESCRIPTION
JOB TITLE: Residency Program Director (RPD)

JOB PURPOSE

The program director is responsible for general administration of the program, including activities related to the recruitment, selection, instruction, supervision, counseling, evaluation, advancement of residents, evaluation and development of preceptors, and the maintenance of records related to program accreditation.

RPDs must meet the ASHP standard for program directors.

EVALUATION

Assessment by Supervisor

Job Task: Residency Program Director

Weight: 5%

Success Criteria
• Acts as a mentor and pharmacy role model for all residents
• Meets with resident(s) on a monthly basis (minimum) and as needed to review resident goals and discuss their progress with the program
• Completes all quarterly assessments by the designated date
• Tracks learning objectives that have been achieved for the residency on a quarterly basis
• If applicable, tracks the achievement of the required disease-state appendix and makes necessary changes to the rotation schedule.
• Regularly attends resident presentations (RITE, seminar, lectures)
• Contributes to the list of resident project ideas at the beginning of the residency calendar year
• Contributes to the MUE program
• Serves as an advisor to either a residency project(s) or a MUE (if applicable)
• Precepts a minimum of four residents per year
Appendix F

JOB DESCRIPTION

Job Title: Associate Director of Graduate Pharmacy Education

JOB PURPOSE

The Associate Director of Graduate Pharmacy Education serves as the liaison between the College of Pharmacy and Medical Center on issues related to the residency program. This individual collaborates with the Director of Graduate Pharmacy Education on issues related to the administration and coordination of the residency program and acts on behalf of the Director of Graduate Pharmacy Education in his/her absence.

JOB FUNCTIONS

1. Serves as the liaison between the College of Pharmacy and the Medical Center on issues related to the residency program.
2. Collaborates with the Director of Graduate Pharmacy Education on issues related to the administration and coordination of the residency program.
3. Acts on behalf of the Director of Graduate Pharmacy Education in his/her absence.
4. Attends Residency Committee meetings as a voting member.
5. Assumes lead role in coordinating selected residency program activities (e.g., recruitment, orientation, project/manuscript activity oversight, preceptor development, evaluation, certificate ceremony) as determined mutually by the Director and Associate Director.

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Appendix G

Policy for presentation/publication of residency service/research projects

Participation in and completion of a service or research project as well as preparation of a manuscript suitable for publication is a requirement for successful completion of ASHP-accredited pharmacy residencies. Opportunities for presentation of project results at regional or national meetings may also arise. Although residents may propose and pursue their own research ideas to meet this requirement, it is likely that residents participate in a project pre-defined by a residency preceptor or RPD. These projects are usually part of the preceptor’s/RPD’s research program. Often, residents are afforded the opportunity to be the lead investigator on such projects and thus be lead presenter/author on the resulting presentation and publication. Conditions for this opportunity will be defined by the preceptor or RPD proposing the project and directing the resident’s participation.

General Policy & Conditions for First Authorship

Whether referring to a formal poster or platform presentation at a professional or scientific meeting or a manuscript submitted for publication in a professional or scientific journal, the resident must play a lead role in conducting the project. This normally means involvement in protocol preparation, obtaining necessary administrative approvals (e.g., Institutional Review Board), data collection, analysis and interpretation, as well as preparation of necessary presentation materials (e.g., slide presentation or poster) and, in the case of a manuscript, lead writer.

Time Limits

Opportunities for first authorship (assuming the above conditions or others defined by the preceptor are met) are time-limited. The time limit on the role of first-listed presenter on a contributed presentation will be determined/defined by the project preceptor and may vary depending on timing of project completion, proposed meetings and abstract deadlines. In the case of manuscripts, submission must take place no later than 4 months from residency completion. Should the resident not submit the manuscript within that timeframe, they will be moved from first author to another authorship position at the discretion of the preceptor. If the resident has not prepared/submitted a suitable publication within 8 months of completing the residency they may forfeit authorship altogether, again at the discretion of the preceptor. At the same time, if the resident is moving forward according to the above schedule in the preparation/submission of the manuscript and the preceptor is failing to make their contributions, the resident may move forward with the process independently.

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Appendix H

Medical University of South Carolina – MUSC Health
PGY-2 Ambulatory Care Pharmacy Residency Program

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children’s hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state’s only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state’s only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org

The Department of Pharmacy Services provides service to patients on a 24-hour basis through multiple inpatient and ambulatory (outpatient) pharmacies to fulfill the department’s mission, vision, and goals of providing optimal pharmaceutical care to all patients.

PGY 2 Ambulatory Care Pharmacy Residency Program Purpose:
PGY2 pharmacy residency programs build on Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if available.

MUSC Health’s PGY-2 Ambulatory Care Pharmacy Residency Program provides unique opportunities for residents within our academic medical center. Close collaborative ties with the Medical University of South Carolina College of Pharmacy provide ample teaching opportunities for residents, including participation and completion of an Academic Preparation Program (optional). The resident’s research experienced is also enhanced through established research programs and additionally offers the Pharmacy Residency Research Certificate Program. Residents are afforded ample opportunities to practice in ambulatory settings delivering advanced patient care. Residents will also be exposed to emerging areas of practice, including telehealth and specialty pharmacy.
RESIDENCY PROGRAM DIRECTOR INFORMATION
Kristy Brittain, PharmD, BCPS, CDE
Associate Professor, Department of Clinical Pharmacy & Outcome Sciences
Medical University of South Carolina College of Pharmacy
Clinical Pharmacy Specialist, MUSC Health
280 Calhoun St QE213D MSC140, Charleston, SC 29425
Phone: 843-792-0050 ; Fax: 843-792-3759
Email: brittain@musc.edu

Residency Rotations: Orientation, Clinical Operational Pharmacy (Staffing), Specialty Pharmacy Quality*, Ambulatory Care 1*, Ambulatory Care 2*, Ambulatory Care 3*, Ambulatory Care 4*, Management, Teaching and Training, Transitions of Care/Population Health, Home-Based Anticoagulation (*Specific clinics will be matched to the resident’s interest and availability of preceptors.)

Elective Rotation Opportunities: Drug Information, Oncology, Psychiatry, Pediatrics, Infectious Disease, Academia, Heart Failure

Additional Learning Experiences: On-call (8 weeks per residency year) with specialty pharmacy or ambulatory services, Research Project, Medication Use Evaluation (matched with another resident), Seminar Presentation

Listing of Current Preceptors
Kristy Brittain, Jenna Byrd Bollick, Jennifer Carter, Kelly Crowley, David Cruse, Aulbrey Drisaldi, Brenda Fauteux, Joli Fermo, Brittany Jones, Julie Leal, Kyle Lenio, Jennifer Mazur, Pam Mazcyk, Brittany Thompson

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Complete ASHP entering interests form and objective-based self-assessment during orientation month</td>
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<td></td>
<td>Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
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<tr>
<td></td>
<td>No NI’s may be present upon graduation of the program.</td>
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<td></td>
<td>Complete all assigned evaluations</td>
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<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
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<tr>
<td></td>
<td>Participate in medication use evaluation(s). Provide a written document with methods, findings, and recommendations.</td>
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<tr>
<td></td>
<td>Complete a research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>Prepare or revise a protocol or collaborative practice agreement</td>
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<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
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<tr>
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<td>Complete all Pharmacy On-call Service requirements (8 weeks assigned)</td>
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<td></td>
<td>Complete all staffing requirements: 4 hour weekly staffing learning experience (scheduled) and every 4th Saturday (scheduled)</td>
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<td></td>
<td>Present a project at an approved local, national, regional or state meeting (including submission of an abstract)</td>
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<td></td>
<td>Evaluate 4 Grand Rounds presentations throughout the year</td>
</tr>
<tr>
<td></td>
<td>Document duty hours (either via PharmAcademic or Kronos TimeKeeping)</td>
</tr>
</tbody>
</table>
Appendix I

Medical University of South Carolina – MUSC Health
PGY-1 Community-Based Pharmacy Residency Program

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children's hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state's only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state’s only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

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The Department of Pharmacy Services provides service to patients on a 24-hour basis through multiple inpatient and ambulatory (outpatient) pharmacies to fulfill the department’s mission, vision, and goals of providing optimal pharmaceutical care to all patients.

PGY 1 Community-Based Pharmacy Residency Program Purpose:

To build upon the Doctor of Pharmacy (PharmD) education and outcomes to develop community-based pharmacist practitioners with diverse patient care, leadership, and education skills who are eligible to pursue advanced training opportunities including postgraduate year two (PGY2) residencies and professional certifications.

Specifically, residents will be held responsible and accountable for the acquiring of the following outcome competencies: provide patient care following the JCPP Pharmacists’ Patient Care Process; provide care to patients in transition between care settings; manage operations and services of the practice; demonstrate personal and professional leadership skills; conduct quality improvement projects; enhance or create new services; provide medication and practice-related education/training; conduct research; and precept student learners.

MUSC Health’s PGY-1 Community-Based Pharmacy Residency Program provides unique opportunities for residents within our academic medical center. Close collaborative ties with the Medical University of South Carolina College of Pharmacy provide ample teaching opportunities for residents, including participation and completion of an Academic Preparation Program. The resident’s research experience is also enhanced with the offering of the Pharmacy Residency Research Certificate Program. Residents are afforded ample opportunities to practice in established areas of advanced patient care, including medication therapy management, immunization delivery, and disease state management. Residents will also participate in emerging areas of practice, including telehealth and specialty pharmacy.
RESIDENCY PROGRAM DIRECTOR INFORMATION
Kristy Brittain, PharmD, BCPS, CDE
Associate Professor, Department of Clinical Pharmacy & Outcome Sciences
Medical University of South Carolina College of Pharmacy
Clinical Pharmacy Specialist, MUSC Health
280 Calhoun St QE213D MSC140, Charleston, SC 29425
Phone: 843-792-0050 ; Fax: 843-792-3759
Email: brittain@musc.edu

Residency Rotations: Orientation, Clinical Operational Pharmacy (Staffing), Specialty Pharmacy*, Ambulatory Care 1*, Ambulatory Care 2*, Management and Clinical Operations, Teaching and Didactic, Medication Therapy Management, Transitions of Care, Home-Based Anticoagulation (*Specific clinics will be matched to the resident’s interest and availability of preceptors.)

Elective Rotation Opportunities: Drug Information, Oncology, Psychiatry, Pediatrics, Infectious Disease, Academia

Additional Learning Experiences: On-call (8 weeks per residency year) with specialty pharmacy or ambulatory services, Research Project, Medication Use Evaluation (matched with another resident), Service Creation and Business Plan, Seminar Presentation

Listing of Current Preceptors
Beth Bartemeyer, Kristin Beeker, Kristy Brittain, Pamela Ciborosky, Kelly Crowley, David Cruse, Aulbrey Drisaldi, Brenda Fauteux, Joli Fermo, Brittany Jones, Jennifer Mazur, Pam Mazcyk, Justin Sanford

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complete initial self-reflection in PharmAcademic</td>
</tr>
<tr>
<td></td>
<td>Complete ASHP entering interests form and objective-based self-assessment during orientation month</td>
</tr>
<tr>
<td></td>
<td>Complete final self-reflection in PharmAcademic</td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
</tr>
<tr>
<td></td>
<td>No NI's may be present upon graduation of the program.</td>
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<tr>
<td></td>
<td>Complete all assigned evaluations</td>
</tr>
<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Participate in medication use evaluation(s). Provide a written document with methods, findings, and recommendations.</td>
</tr>
<tr>
<td></td>
<td>Complete a research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>Create a collaborative practice agreement or protocol</td>
</tr>
<tr>
<td></td>
<td>Complete a new or enhanced service project with associated business plan (this may be the same as the research project outlined above)</td>
</tr>
<tr>
<td>Task</td>
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<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
<td></td>
</tr>
<tr>
<td>Complete all Pharmacy On-call Service requirements (8 weeks assigned)</td>
<td></td>
</tr>
<tr>
<td>Complete all staffing requirements: 8-hour weekly staffing learning experience (scheduled) and every 4th Saturday (scheduled)</td>
<td></td>
</tr>
<tr>
<td>Present a project at an approved local, national, regional or state meeting (including submission of an abstract)</td>
<td></td>
</tr>
<tr>
<td>Evaluate 4 Grand Rounds presentations throughout the year</td>
<td></td>
</tr>
<tr>
<td>Document duty hours (either via PharmAcademic or Kronos TimeKeeping)</td>
<td></td>
</tr>
</tbody>
</table>
Purpose of the PGY2 Critical Care Pharmacy Residency at MUSC

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the states only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the states only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond. In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children’s hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state’s only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the states only transplant center. In 2019, for the fifth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina, nationally ranked in 8 specialties, and high-performing in 10 specialties. Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org.

In addition to general medical and surgical services, MUSC offers a variety of specialty services including emergency medicine/toxicology, cardiology/cardiothoracic, neurology/neurosurgery (comprehensive stroke center), transplant (kidney, pancreas, liver, heart, lung), trauma (level 1), psychiatry, and numerous pediatric services. The Department of Pharmacy Services provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies to fulfill the department’s mission, vision, and goals of providing optimal pharmaceutical care to all patients.

The PGY2 Critical Care Pharmacy residency program at MUSC is a one-year post-graduate training program designed to prepare critical care specialists. Residents who complete the program are qualified to accept a position and practice in a variety of critical care environments including, but not limited to: medical, surgical-trauma, neurosurgical, cardiothoracic, emergency medicine, and transplant. As part of the extensive training residents will receive, they will be able to identify, prevent, and resolve medication-related problems, participate as active members of a multidisciplinary healthcare team, provide education to various healthcare providers and patients, conduct effective research and medication-use-evaluations, and demonstrate leadership skills.

**Intended Outcomes**

Graduating PGY2 Critical Care residents who successfully complete the one year program will:

- Effectively coordinate and manage the pharmaceutical care needs of a complex critically ill medical or surgical patient
• Garner skills required to precept PharmD candidates and PGY-1 resident colleagues, to develop and modify protocols/guidelines, to present educational series to healthcare staff, to participate as part of a multidisciplinary team, and to conduct effective research.

**Residency Program Structure**
The Critical Care residency program is designed to provide the flexibility to adapt to the resident’s specific learning needs and career goals. The training is provided through concentrated clinical rotations and longitudinal experiences.

There are 7 **required** clinical learning experiences plus a mandatory research month and orientation month for residents coming from PGY1 programs outside of MUSC.

<table>
<thead>
<tr>
<th>Learning Experience</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation (July of each year)</td>
<td>1 month</td>
</tr>
<tr>
<td>Research (December of each year)</td>
<td>1 month</td>
</tr>
<tr>
<td>Medical Intensive Care Unit (MICU)</td>
<td>2 months</td>
</tr>
<tr>
<td>Cardiothoracic Intensive Care Unit (CTICU)</td>
<td>1 month</td>
</tr>
<tr>
<td>Surgical Trauma Intensive Care Unit (STICU)</td>
<td>1 month</td>
</tr>
<tr>
<td>Transplant (Inpatient) which entails either abdominal or heart-lung transplant</td>
<td>1 month</td>
</tr>
<tr>
<td>Neurosciences Intensive Care Unit (NSICU)</td>
<td>1 month</td>
</tr>
<tr>
<td>Medical Surgical Intensive Care Unit (MSICU)</td>
<td>1 month</td>
</tr>
<tr>
<td>Clinical On-call</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Operational Staffing</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Journal Club</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Critical Care Lecture Series</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Research and Medication Use Evaluation</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Seminar</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Hospital or Pharmacy Committee Involvement</td>
<td>Longitudinal</td>
</tr>
</tbody>
</table>

The program is flexible in its design to offer the following elective rotations:

<table>
<thead>
<tr>
<th>Elective Learning Experiences</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medicine</td>
<td>1 month</td>
</tr>
<tr>
<td>Cardiac Intensive Care Unit (CICU)</td>
<td>1 month</td>
</tr>
<tr>
<td>Antimicrobial Stewardship</td>
<td>1 month</td>
</tr>
<tr>
<td>Infectious Diseases Consult</td>
<td>1 month</td>
</tr>
<tr>
<td>Benign Hematology Consult</td>
<td>2 weeks – 1 month</td>
</tr>
<tr>
<td>Malignant Hematology</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatric Intensive Care Unit (PICU)</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatric Cardiac Intensive Care Unit (PCICU)</td>
<td>1 month</td>
</tr>
</tbody>
</table>
### PGY2 Critical Care Preceptors – all with affiliations with the Medical University of South Carolina College of Pharmacy

<table>
<thead>
<tr>
<th>Required Rotation Preceptors</th>
<th>Additional Elective Preceptors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Joe Mazur, PharmD, BCPS</strong></td>
<td><strong>Barbara S. Wiggins, PharmD, CLS, BCPS, BCCCP, FNLA, FAHA, FCCP, FACC</strong></td>
</tr>
<tr>
<td>B.S. Pharmacy: University of Manitoba 1990</td>
<td>B.S. Pharmacy: St. Louis College of Pharmacy 1993</td>
</tr>
<tr>
<td>PharmD: Wayne State University 1995</td>
<td>PharmD: Medical College of Virginia 1998</td>
</tr>
<tr>
<td>Fellowship Critical Care/ID: Henry Ford Hospital 1996</td>
<td>Fellowship Cardiology and Emergency Medicine: Virginia Commonwealth University 1999</td>
</tr>
<tr>
<td>Medical Intensive Care Unit</td>
<td>Cardiovascular Intensive Care Unit</td>
</tr>
<tr>
<td><a href="mailto:mazurj@musc.edu">mazurj@musc.edu</a></td>
<td><a href="mailto:wiggib@musc.edu">wiggib@musc.edu</a></td>
</tr>
</tbody>
</table>

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<tr>
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<td>PharmD: Medical College of Virginia 1998</td>
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<tr>
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<td>Fellowship Cardiology and Emergency Medicine: Virginia Commonwealth University 1999</td>
</tr>
<tr>
<td>Medical Intensive Care Unit</td>
<td>Cardiovascular Intensive Care Unit</td>
</tr>
<tr>
<td><a href="mailto:mazurj@musc.edu">mazurj@musc.edu</a></td>
<td><a href="mailto:wiggib@musc.edu">wiggib@musc.edu</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Jaclyn M. Hawn, PharmD</strong></th>
<th><strong>Chara Calhoun, PharmD, BCPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmD: The Ohio State University 2016</td>
<td>PharmD: Purdue University College of Pharmacy 2013</td>
</tr>
<tr>
<td>PGY1: Cleveland Clinic 2017</td>
<td>PGY1: Mission Hospital 2014</td>
</tr>
<tr>
<td>PGY2 Critical Care: Cleveland Clinic 2018</td>
<td>PGY2 Emergency Medicine: Mission Hospital 2015</td>
</tr>
<tr>
<td>Cardiovascular Intensive Care Unit/ CT Surgery</td>
<td>Emergency Medicine</td>
</tr>
<tr>
<td><a href="mailto:hawnj@musc.edu">hawnj@musc.edu</a></td>
<td><a href="mailto:calhouncd@musc.edu">calhouncd@musc.edu</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Carolyn A. Magee, PharmD, BCCCP</strong></th>
<th><strong>Kyle Weant, PharmD, BCPS, BCCCP, FCCP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmD: University of Kansas 2015</td>
<td>PharmD: University of North Carolina – Chapel Hill 2003</td>
</tr>
<tr>
<td>PGY1: University of Kentucky Health Care 2016</td>
<td>PGY1: University of Kentucky HealthCare 2004</td>
</tr>
<tr>
<td>PGY2 Critical Care: University of Kentucky Health Care 2017</td>
<td>PGY2 Critical Care: University of Kentucky HealthCare 2005</td>
</tr>
<tr>
<td>Medical Surgical Intensive Care Unit</td>
<td>Emergency Medicine</td>
</tr>
<tr>
<td><a href="mailto:mageeca@musc.edu">mageeca@musc.edu</a></td>
<td><a href="mailto:weant@musc.edu">weant@musc.edu</a></td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>Ron Neyens, PharmD</strong></th>
<th><strong>Krutika N. Mediwal, PharmD, BCPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmD: South Dakota State University 2004</td>
<td>PharmD: South Carolina College of Pharmacy, USC 2015</td>
</tr>
<tr>
<td>PGY1: University of Utah 2005</td>
<td>PGY1: University of Kentucky HealthCare 2016</td>
</tr>
<tr>
<td>PGY2 Critical Care: University of Florida Health Jacksonville 2006</td>
<td>PGY2 Infectious Diseases: University of Kentucky HealthCare 2017</td>
</tr>
<tr>
<td>Neurocritical Care Unit</td>
<td>Antimicrobial Stewardship/ID Consult</td>
</tr>
<tr>
<td><a href="mailto:neyens@musc.edu">neyens@musc.edu</a></td>
<td><a href="mailto:mediwala@musc.edu">mediwala@musc.edu</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Melanie N. Smith, PharmD, BCPS, BCCCP</strong></th>
<th><strong>Brian R. Raux, PharmD, BCPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmD: University of Arkansas for Medical Sciences 2015</td>
<td>PharmD: Northeastern University 2016</td>
</tr>
<tr>
<td>PGY1: University of Florida Health Jacksonville 2016</td>
<td>PGY1: Medical University of South Carolina 2016</td>
</tr>
<tr>
<td>PGY2 Critical Care: Medical University of South Carolina 2017</td>
<td>PGY2 Infectious Diseases: Medical University of South Carolina 2018</td>
</tr>
<tr>
<td>Surgical-Trauma Intensive Care Unit</td>
<td>Antimicrobial Stewardship/ID Consult</td>
</tr>
<tr>
<td><a href="mailto:smitmela@musc.edu">smitmela@musc.edu</a></td>
<td><a href="mailto:raux@musc.edu">raux@musc.edu</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Holly B. Meadows, PharmD, BCPS</strong></th>
<th><strong>Lauren Haney, PharmD, BCPS, BCPPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmD: University of North Carolina Eschelman School of Pharmacy 2009</td>
<td>PharmD: Medical University of South Carolina 2007</td>
</tr>
<tr>
<td>PGY1: Medical University of South Carolina 2010</td>
<td>PGY1: Medical University of South Carolina 2008</td>
</tr>
<tr>
<td>PGY2 Transplant: Medical University of South Carolina 2011</td>
<td>PGY2 Pediatrics: Medical University of South Carolina 2009</td>
</tr>
<tr>
<td>Solid Organ Transplant</td>
<td>Pediatric Cardiac Intensive Care Unit</td>
</tr>
<tr>
<td><a href="mailto:barrier@musc.edu">barrier@musc.edu</a></td>
<td><a href="mailto:haneyl@musc.edu">haneyl@musc.edu</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Neha Patel, PharmD, BCPS</strong></th>
<th><strong>Jill Thompson, PharmD, BCPPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmD: St. Louis College of Pharmacy 2007</td>
<td>PharmD: University of Tennessee Health Science Center 2001</td>
</tr>
<tr>
<td>PGY1: Medical University of South Carolina 2008</td>
<td>PGY1: University of Tennessee Health Science Center &amp; Le Bonheur Children’s Medical Center 2002</td>
</tr>
<tr>
<td>PGY2 Transplant: Medical University of South Carolina 2009</td>
<td>PGY2 Pediatric Critical Care: University of Tennessee Health Science Center &amp; Le Bonheur Children’s Medical Center 2003</td>
</tr>
<tr>
<td>Solid Organ Transplant</td>
<td>Pediatric Intensive Care Unit</td>
</tr>
<tr>
<td><a href="mailto:paten@musc.edu">paten@musc.edu</a></td>
<td><a href="mailto:thompsam@musc.edu">thompsam@musc.edu</a></td>
</tr>
<tr>
<td>Preceptors (Expectations by the RPD)</td>
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<tr>
<td>------------------------------------</td>
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</tr>
<tr>
<td>Each preceptor will be responsible for the coordination of their own learning experience. The learning experience will be modified accordingly, with the assistance of the RPD, to ensure the resident achieves the assigned goals. The preceptor is expected to exhibit the characteristics and aptitude necessary for residency training, including the four key preceptor roles when teaching clinical problem solving (instruction, modeling, coaching and facilitation). The resident’s activities will be monitored, and they will be provided with formative and summative evaluations, with the over-arching goal of advancing the resident’s competency on the specific assigned learning objectives.</td>
<td></td>
</tr>
<tr>
<td>The specific preceptor responsibilities are as follows:</td>
<td></td>
</tr>
<tr>
<td>• Understand the resident’s responsibilities to the residency teaching experience and to ongoing activities such as projects, presentations, student discussions, manuscript preparation.</td>
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<tr>
<td>• Develop and maintain goals and objectives for the specific residency learning experience(s).</td>
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<tr>
<td>• Review the resident’s training plan and resident’s previous performance and modify the learning experience accordingly.</td>
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<tr>
<td>• Orient the resident to the rotation’s setting and monitor/evaluate/critique the resident’s performance during the experience.</td>
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<tr>
<td>• Provide the resident a midpoint in written and verbal format, and be able to complete the final summary PharmAcademic™ evaluation by month’s end as outlined in the residency manual.</td>
<td></td>
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<tr>
<td>• Advise the RPD of any appropriate interventions that may be needed relevant to the resident’s performance.</td>
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</tr>
<tr>
<td>• Actively participate in an annual feedback session in which preceptors and the RPD consider overall program changes based on evaluations, observations, and direct resident feedback and surveys.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Residency Advisor Role</th>
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<tbody>
<tr>
<td>The Residency Advisor(s) are appointed by the Residency Program Director (RPD) and are responsible for the supervision, guidance and on-going evaluation of the resident’s progress throughout the residency. Advisors serve as the resident’s advocate and can be a sounding board for the resident, foster professional development, assist with future career planning, provide support and encouragement through difficult times, and share in rewarding times in the residency. Essentially, they serve as formal appointed mentors.</td>
<td></td>
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</tbody>
</table>
Specific Resident Responsibilities

The residents’ role is that of a student, novice practitioner, and emerging clinician and/or administrator. The resident is to participate in ongoing clinical and administrative services with the assistance of the residency preceptor and develop their skill set into a competent clinical practitioner and/or future administrator. The resident must accept and apply qualitative feedback in addition to performing self-evaluations on their performance.

To promote an effective and productive residency experience, the relationship between a resident and rotation preceptor must be highly communicative, and a meaningful dialogue must be achieved.

Specifically, the resident will:

- Initiate discussion of the resident development plan and identified focus areas for improvement, encouraging ownership in self-development. This is expected to occur on the first day of each new clinical rotation.
- Sign off on the learning experience orientation form in PharmAcademic™ on the first day of each new clinical rotation.
- Understand the preceptor’s expectations for daily activities, services provided and preceptor contact.
- As outlined by the clinical preceptor, provide a detailed account of activities as they relate to the goals and objectives of the learning experience.
- Maintain active communication with the preceptor, advisor and/or RPD concerning any planned off-service activities (e.g., meetings, seminars, projects, staffing, on-call commitments) that the resident will be participating in during the rotation. Leave requests must be approved at a minimum of 30 days in advance to any rotation and the resident is required to complete a minimum of 15 days on each one-month rotation.
- Maintain strict deadlines with PharmAcademic™ activities—outlined in the MUSC residency manual—see table for specific deadlines. This involves clinical rotation evaluations, project/research work, mini-MUE work, seminar preparation, any additional talk or in-service/presentation that will require preceptor feedback, and monthly updates to the concurrent uploaded documents. No PTO or administrative leave requests will be granted unless ALL due PharmAcademic™ evaluations are completed.
- Maintain the disease-state appendix for review each quarter with the advisor and RPD (see appendix).
- Complete the critical care residency monthly report (see appendix) each month and submit to the residency advisor at a minimum of 1 week PRIOR to the monthly critical care residency group meeting.
- Participate in pharmacy functions (e.g., rounds, patient care conferences, lectures, departmental meetings, clinical staff meetings, assigned committee meetings, journal clubs, critical care educational series, seminars, RITEs, and APP/research certificate activities) in accordance with the MUSC residency manual and as outlined below.

Adult Inpatient On-Call Learning Experience Expectations

Each critical care resident will participate in the Pharmacy On-Call Service. Call will be divided into two different shifts: begins Friday at 0800 and ends Monday at 0759 OR begins Monday at 0800 and
ends Friday at 0759. If assigned to a weekend call shift, residents must be present on site for a minimum of 8 hours each Saturday and Sunday. When on-call, the resident is responsible for ensuring all consultations and follow-up are completed and logged into the RedCap database. Critical Care residents will serve as the primary backup for PGY1 Pharmacy Resident colleagues after they are deemed competent.

**Operational Staffing Learning Experience Expectations**

Each critical care resident will participate in operational staffing at either the Ashley River Tower or the Main Hospital. Staffing will consist of one weekend (16 hours) per month in the designated area. During this experience, residents will function as a clinical pharmacist providing pharmaceutical care for patients admitted to the designated service line. This experience will consist of order verification, pharmacokinetics, anticoagulation monitoring, medication reconciliation, discharge medication review, patient counseling, and emergency response.

**Critical Care Journal Club Learning Experience Expectations**

Each critical care resident is expected to plan and participate in the monthly critical care journal club as assigned (see appendix). These journal club experiences may be attended by critical care, emergency medicine, and transplant preceptors as well as critical care, emergency medicine, transplant, PGY1 residents, and students on critical care rotations. Planning each journal club will be rotated monthly between assigned critical care residents. The assigned critical care resident is responsible for the following:

- Identify 2 studies for presentation (1 being a background/landmark study and the other being a newer, yet related study). These will be identified and approved by the assigned preceptor at a minimum of 2 weeks in advance.
- On the months that learners are presenting, identify a presenter no later than the end of the 1st week of each month and communicate expectations to the assigned presenter.
- Reserve a room each month (via 25Live).
- Send calendar invites to all preceptors and interested students/residents with attached articles at a minimum of 1 week in advance.
- The assigned critical care resident will present the background/landmark study and then assist, mentor, and guide any student/learner presenting.
- Both critical care residents are expected to read articles and prepare discussion points prior to journal club. Preceptors will be available to facilitate the discussion and the assigned preceptor will offer feedback following the presentation.
- Any deviation from scheduled journal club dates should be discussed with the RPD, residency advisor, and assigned preceptor PRIOR to rescheduling or cancelling.

**Critical Care Education Series Learning Experience Expectations**

Each critical care resident is expected to participate in the weekly critical care education series. These educational experiences will be attended by critical care preceptors (and other preceptors as appropriate) and physicians depending upon the topic. These experiences are designed to cover basic critical care topics considered essential to the development of a well-rounded critical care practitioner and will prepare the resident to sit for the BCCCP exam immediately upon completion of the residency program. Residents are responsible for the following:

- Attending all weekly critical care education series presentations. Any missed meetings should be discussed with the RPD and/or residency advisor PRIOR to the meeting time.
- Being prepared to discuss each weekly topic by reading assigned articles (located in MUSC Box) and reviewing appropriate disease states.
• Presenting 3 topics throughout the residency year. Topics will be identified and assigned at the beginning of the residency year. Residents are encouraged to consider timing when picking topics to prevent overlap with seminar or RITE preparation. Topics should be presented in a formal fashion with Power-point slides and should encourage audience participation and engagement.

• Residents should identify the assigned preceptor for the topic they would like to present. They should work with the assigned preceptor to identify appropriate articles for dissemination (uploading via MUSC Box) to the group and should establish an appropriate timeline for preparation and review of the presentation. It is expected that the presentation is finalized, and preceptor approved at a minimum of 1 week in advance to the assigned meeting time.

**Research Learning Experience Expectations**
Each critical care resident is expected to complete a longitudinal research project fit for publication with the mentorship of one or more research advisor(s). The residents may select a project provided by the critical care preceptors or create their own project with approval from the RPD, residency advisor, and research project mentor. Residents are required to participate in all steps in the research process and will be expected to:

• Submit a research project timeline to the research mentors and to adhere to all established deadlines. If circumstances dictate a change in the timeline, this must be discussed with the RPD, program advisor, and research project mentor(s). At a minimum, all data collection is expected to be completed and ready for analysis by the end of December (assigned research project learning experience).

• Submit an IRB (if not already approved via the flipped research model)

• Participate in data collection

• Participate in statistical design and analysis

• Prepare and formally submit a manuscript to an appropriate peer-reviewed journal by the end of the residency year. **This is an expectation to successfully complete the training program.** If unforeseen circumstances limit the ability to do so, this must be discussed with the RPD, program advisor, and research project mentor(s).

• Present research at a national critical care meeting and/or the local pharmacy research showcase.

**Medication Use Evaluation Learning Experience Expectations**
Each critical care resident is expected to participate in a medication use evaluation relevant to care of ICU patients with a focus on cost savings and/or quality improvement. The medication use evaluation should:

• Identify problems and opportunities for improvement and analyze relevant background data.

• Evaluate data generated by health information technology or automated systems to identify opportunities for improvement.

• Utilize best practices to identify opportunities for improvement.

• When needed, make medication-use policy recommendations based on a review of practice standards, guidelines, and other evidence (e.g., National Quality Measures, Institute for Safe Medication Practice alerts, Joint Commission sentinel alerts, etc…)

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Updated June 2019
Each resident should contribute equally to the medication use evaluation. Residents will be responsible for:

- Arranging meetings with preceptor mentors
- Data collection and analysis
- Presenting MUE data to pharmacy administration and appropriate committees (i.e. Critical Care Quality)
- Adhering to all deadlines established by the critical care preceptors

**Seminar Learning Experience Expectations**

Each critical care resident is expected to participate in the MUSC Resident seminar series to complete outcome R4: teaching, education, and dissemination of knowledge. The resident is expected to:

- Identify a subject related to critical care pharmacotherapy for appropriate dissemination of knowledge to pharmacists and pharmacy residents.
- Identify a preceptor mentor deemed to have expertise in the topic of interest.
- Work with the assigned preceptor to establish an appropriate timeline for preparation and review of the presentation. It is expected that the presentation is finalized, and preceptor approved at a minimum of 1 week in advance to the assigned meeting time.
- Identify preceptors to evaluate presentation style/technique.

**Committee Involvement Expectations**

Each critical care resident is expected to participate in pharmacy or Integrated Centers of Clinical Excellence (ICCE) committee to complete outcome R3: leadership and management. The resident is expected to:

- Work with the RPD and advisor to identify an appropriate committee for participation at the beginning of the residency year. It is an expectation that one critical care resident participates in the pharmacy practice committee and one participates in the pharmacy on-call committee. All other committees will depend upon both the pharmacy departments current needs as well as the resident’s individual interests.
- Attend all committee meetings as assigned throughout the year.
- Actively participate in committee proceedings (i.e. agenda and minute preparation, sub-committee participation, protocol development, medication use evaluation, communication within the pharmacy department regarding committee activities, etc…).
- Institutional committee participation may be substituted with active involvement with national or international critical care or pharmacy organization committees at the discretion of the RPD and advisor.

**APP and Research Certificate Expectations**

Each critical care resident is expected to participate in the academician preparation program (APP) and research certificate program unless completed as part of their respective PGY1 residency training program.

**Individual Learning Experience Evaluations and Grading**

The resident is expected to successfully complete and achieve all of the required outcomes according to ASHP Educational Outcomes, Goals and Objectives for PGY2 Pharmacy Residencies in Critical Care. This will include the following under the “achieved category”:
• Outcome R1: Patient care
• Outcome R2: Advancing practice and improving patient care
• Outcome R3: Leadership and management
• Outcome R4: Teaching, education, and dissemination of knowledge

The resident is expected to demonstrate proficiency in 90% or above of all activities linked to these specific outcomes via the various goals and objectives assigned from the learning experiences to successfully complete the MUSC PGY2 critical care residency program. The resident will observe, learn, act, and then master a particular activity which will deem the resident as achieving that goal. This again will be highly individualized and not applied to every resident in exactly the same manner.

For the various elective outcomes, goals, and objectives for PGY2 Pharmacy Residencies in Critical Care, the resident will have to select a minimum of one outcome and demonstrate proficiency in all assigned activities linked to these specific outcomes via the various goals and objectives assigned from the learning experiences to successfully complete the MUSC PGY2 critical care residency program. These include the following outcomes:

• Outcome E1: Academia
• Outcome E2: Added leadership and practice management skills
• Outcome E3: Mass casualty

**Selection of Residency Candidates**

• Invitation for on-site interview
  - Following receipt of the full application packet as outlined on [http://academicdepartments.musc.edu/pharmacy_services/residency/](http://academicdepartments.musc.edu/pharmacy_services/residency/) candidates will be screened using the MUSC PGY2 critical care residency screening tool.
  - The top 5 to 7 candidates will be brought in for an on-site interview will be decided on collaboratively by the Critical Care/Transplant PharmD group (Joe Mazur –RPD, Ron Neyens, Barbara Wiggins, Carolyn Magee, Melanie Smith, Jaclyn Hawn, Neha Patel, Caroline Perez, Holly Meadows) based on objective scoring criteria from the MUSC PGY2 critical care residency screening tool and midyear interviews for off-site candidates and internal discussions for internal candidates.
  - Internal candidates are screened once their application is received and the Critical Care/Transplant PharmD group determines if an interview should take place prior to midyear.

• On-site interviews
  - Include interviews with the multidisciplinary team including behavioral based questions and each interviewer will provide an interview score.
  - Interview scores are collated and added to the pre-interview screeningscore.
  - Candidates are then ranked and discussed by the Critical Care/Transplant PharmD group to determine the final ranking of candidates.

• Criteria for selection
  - Following internal candidate interviews prior to midyear the Critical Care/Transplant PharmD group meets and determines if an offer for the PGY2 position should be made prior to midyear or if they would like to wait until all candidates are evaluated at midyear.
For external and internal candidates wishing to partake in the match, final ranking is determined by the combined score of the pre-interview screening tool and on-site interview score along with expert opinion from the Critical Care/Transplant PharmD group.

Joe Mazur, PharmD, BCPS
Residency Program Director, PGY-2 Critical Care Residency Program
Clinical Specialist-MICU, Clinical Pharmacy Manager
Clinical Associate Professor, Department of Pharmacy and Clinical Sciences
South Carolina College of Pharmacy - MUSC Campus
Medical University of South Carolina
Department of Pharmacy Services
150 Ashley Ave
Charleston, SC 29425
Phone: 843-792-5686
Fax: 843-792-0566
Pager: 843-792-0590 #11169
Appendices:
A. Critical Care Resident Monthly Report
B. Critical Care Resident Disease State Appendix
C. Critical Care Resident Journal Club
D. Critical Care Resident Lecture Series
E. Critical Care Resident Research Contract
F. Critical Care Resident Program Timeline
G. Critical Care Resident
# PGY-2 Critical Care Resident Monthly Report

<table>
<thead>
<tr>
<th>Resident:</th>
<th>Date:</th>
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## Project/Research Progress

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## Stage of Project:

- **Protocol development**
  - IRB Status: Data request submitted
  - IRB Status: Data request submitted
  - IRB Status: Data collection
  - IRB Status: Data collection
  - IRB Status: Number of patients collected:
  - IRB Status: Number of patients collected:
  - IRB Status: Patient collection goal:
  - IRB Status: Patient collection goal:
  - IRB Status: Analysis
  - IRB Status: Analysis
  - IRB Status: Manuscript writing
  - IRB Status: Manuscript writing (if required)

## Project agenda for next month:

1. 1.
2. 2.
3. 3.

## Any project issues:

1. 1.
2. 2.
3. 3.

## Presentation Progress

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<thead>
<tr>
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<th>Title</th>
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## Additional Residency Projects

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## Committee Assignments

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<th>Meeting minutes completed (Y/N)</th>
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Updated June 2019
A. Critical Care Resident Monthly Report

### Advisor Meetings

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<tr>
<th>Advisor Name</th>
<th>Date of Meeting</th>
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### Pharmacademic Evaluation Completion

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### Absence tracking

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<td>PTO (20 allotted for residency year)</td>
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*I attest this monthly report is accurate.*

Resident Signature: __________________________ Date: ____________
### Disease State Appendix

All required areas are to be completed within the 12-month PGY2 Critical Care residency.

The resident will demonstrate an understanding of the MOA, pharmacokinetics, pharmacodynamics, pharmacogenomics, pharmacoconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of medications and non-traditional therapies, where relevant, that are applicable to the diseases and conditions and have the ability to design appropriate treatment regimens and treat and assess outcomes.

The resident will demonstrate and understanding of signs and symptoms, epidemiology, risk factors and etiology, pathogenesis, pathophysiology, clinical course, and a comprehensive pharmacotherapy treatment plan. The resident should have experience managing patients with the required diseases and conditions. Those marked with an (*) asterisk may be met through didactic instruction, case-based application, or simulation.

MH=Main Hospital; ART=Ashley River Tower; ED=Emergency Department

T=Topic Discussion; R=Reading Assignment; P=Presentation; M=Managed

<table>
<thead>
<tr>
<th>Disease States Reviewed</th>
<th>Patients Seen [T, R, P, M]</th>
<th>Literature Reviewed</th>
<th>Date</th>
<th>Service [MH, ART, ED]</th>
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<tr>
<td>Mechanical Ventilation</td>
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### B. Critical Care Resident Disease State Appendix

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<th>Disease States Reviewed</th>
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<td>*Pneumothorax and Hemothorax</td>
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<td>*Inhaled Medication Administration</td>
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**Cardiovascular**

- ACLS
- Arrhythmias (Atrial and Ventricular)
- Acute Decompensated Heart Failure
- ACS
- Hypertensive Emergencies and Urgencies
- Shock Syndromes
- *Acute Aortic Dissection*
- *Pericardial Tamponade*
- *Mechanical Devices (intra-arterial balloon pumps, ECLS, ECMO)*
- *Invasive and Non-Invasive Hemodynamic Monitoring*
- *PALS*
### B. Critical Care Resident Disease State Appendix

<table>
<thead>
<tr>
<th>Renal</th>
<th>Patients Seen [T, R, P, M]</th>
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B. Critical Care Resident Disease State Appendix

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<th>Service</th>
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<td>*EEG or BIS Monitoring</td>
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<table>
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### B. Critical Care Resident Disease State Appendix

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## Critical Care Resident Disease State Appendix

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### Hematology

- Acute VTE
- Coagulopathies
- Drug-Induced Thrombocytopenia
- Blood Loss and Blood Component Replacement
- *Anemia of Critical Illness*
- *Drug-Induced Hematologic Disorders*
- *Sickle Cell Crisis*
- *Methemoglobinemia*

### Toxicology

- Toxidromes
- Withdrawal Syndromes
- *Drug Overdose*
B. Critical Care Resident Disease State Appendix

<table>
<thead>
<tr>
<th>*Antidotes/Decontamination Strategies</th>
<th>Disease States Reviewed</th>
<th>Patients Seen [T, R, P, M]</th>
<th>Literature Reviewed</th>
<th>Date</th>
<th>Service [MH, ART, ED]</th>
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</thead>
</table>

### Infectious Diseases

- CNS Infections
- Complicated Intra-Abdominal Infections
- Pneumonia
- Endocarditis
- Sepsis
- Fever
- Antibiotic Stewardship
- Clostridium Difficile
- *SSTI’s
- *UTI’s
- *Wound Infections
- *Catheter-Related Infections
- *Infections in the Immunocompromised Host
- *Pandemic Diseases
- *Febrile Neutropenia
- *Acute Osteomyelitis
B. Critical Care Resident Disease State Appendix

<table>
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<tr>
<th>Disease States Reviewed</th>
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<td>Supportive Care</td>
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<td>Nutrition (Enteral, PN, Special Populations)</td>
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<td>*Pharmacogenomic Implications</td>
<td></td>
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<tr>
<td>*Oncologic Emergencies</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>*Other Devices</td>
<td></td>
<td></td>
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<tr>
<td>Intravascular Devices</td>
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<td></td>
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<tr>
<td>Peripheral Nerve Stimulators</td>
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<tr>
<td>IV Pumps</td>
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</tr>
</tbody>
</table>
## Critical Care Journal Club

<table>
<thead>
<tr>
<th>Date</th>
<th>Presenter 1</th>
<th>Presenter 2</th>
<th>Preceptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 20, 2019</td>
<td>Van</td>
<td>Chris</td>
<td>Carolyn</td>
</tr>
<tr>
<td>September 17, 2019</td>
<td>Chris</td>
<td>Learner</td>
<td>Joe</td>
</tr>
<tr>
<td>October 15, 2019</td>
<td>Van</td>
<td>Learner</td>
<td>Ron</td>
</tr>
<tr>
<td>November 19, 2019</td>
<td>Chris</td>
<td>Learner</td>
<td>Jackie</td>
</tr>
<tr>
<td>January 21, 2020</td>
<td>Chris</td>
<td>Van</td>
<td>Melanie</td>
</tr>
<tr>
<td>February 25, 2020</td>
<td>Van</td>
<td>Learner</td>
<td>Barbara</td>
</tr>
<tr>
<td>March 17, 2020</td>
<td>Chris</td>
<td>Learner</td>
<td>Joe</td>
</tr>
<tr>
<td>April 21, 2020</td>
<td>Van</td>
<td>Learner</td>
<td>Carolyn</td>
</tr>
<tr>
<td>May 19, 2020</td>
<td>Chris</td>
<td>Learner</td>
<td>Ron</td>
</tr>
<tr>
<td>June 16, 2020</td>
<td>Van</td>
<td>Learner</td>
<td>Jackie</td>
</tr>
</tbody>
</table>

No CCJC in December

## Critical Care Resident Lecture Series

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Resident</th>
<th>Preceptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/31/2019</td>
<td>IV access</td>
<td></td>
<td>Kyle Weant</td>
</tr>
<tr>
<td>8/7/2019</td>
<td>Sedation/Analgesia/NMBs</td>
<td></td>
<td>Ron Neyens</td>
</tr>
<tr>
<td>8/14/2019</td>
<td>Mechanical ventilation Review</td>
<td>Pulm Fellow</td>
<td></td>
</tr>
<tr>
<td>8/21/2019</td>
<td>Radiology/Imaging</td>
<td>Pulm Fellow</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pulm Fellow/Neuro Fellow</td>
<td></td>
</tr>
<tr>
<td>8/28/2019</td>
<td>Hemodynamics</td>
<td>Pulm Fellow</td>
<td></td>
</tr>
<tr>
<td>9/4/2019</td>
<td>Delirium and Sleep in the ICU</td>
<td></td>
<td>Carolyn Magee</td>
</tr>
<tr>
<td>9/11/2019</td>
<td>Acid Base Review</td>
<td></td>
<td>Joe Mazur</td>
</tr>
<tr>
<td>9/18/2019</td>
<td>Hypovolemic/Distributive Shock</td>
<td></td>
<td>Jackie Hawn</td>
</tr>
<tr>
<td>9/25/2019</td>
<td>Fluids</td>
<td></td>
<td>Melanie Smith</td>
</tr>
<tr>
<td>10/2/2019</td>
<td>GI Bleeds</td>
<td></td>
<td>Carolyn Magee</td>
</tr>
<tr>
<td>10/9/2019</td>
<td>ACS</td>
<td></td>
<td>Barbara Wiggins</td>
</tr>
<tr>
<td>10/16/2019</td>
<td>Cardiogenic Shock</td>
<td>Van Bui</td>
<td>Jackie Hawn</td>
</tr>
<tr>
<td>10/23/2019</td>
<td>Anticoagulant Reversal</td>
<td></td>
<td>Christian Hauser</td>
</tr>
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Updated July 2019
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter(s)</th>
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</thead>
<tbody>
<tr>
<td>11/6/2019</td>
<td>ARDS</td>
<td>Joe Mazur</td>
</tr>
<tr>
<td>11/13/2019</td>
<td>ACLS/RSI</td>
<td>Stephanie Barre</td>
</tr>
<tr>
<td>11/20/2019</td>
<td>Acute Decompensated Heart Failure</td>
<td>Barbara Wiggins</td>
</tr>
<tr>
<td>11/27/2019</td>
<td>Hypertensive Urgency/Emergency</td>
<td>Jackie Hawn</td>
</tr>
<tr>
<td>12/4/2019</td>
<td>Nephrology-RRT</td>
<td>Carolyn Magee</td>
</tr>
<tr>
<td>12/18/2019</td>
<td>Arrhythmias</td>
<td>Van Bui</td>
</tr>
<tr>
<td>1/8/2020</td>
<td>TBI I</td>
<td>Melanie Smith</td>
</tr>
<tr>
<td>1/15/2020</td>
<td>Status Epilepticus</td>
<td>Christian Hauser</td>
</tr>
<tr>
<td>1/22/2020</td>
<td>TBI II</td>
<td>Van Bui</td>
</tr>
<tr>
<td>1/29/2020</td>
<td>Liver Failure Complications</td>
<td>Carolyn Magee</td>
</tr>
<tr>
<td>2/5/2020</td>
<td>Transplant I</td>
<td>Haley Perkins</td>
</tr>
<tr>
<td>2/12/2020</td>
<td>Transplant II</td>
<td>Keith Foster</td>
</tr>
<tr>
<td>2/26/2020</td>
<td>SCCM Debriefing</td>
<td>Critical Care Residents</td>
</tr>
<tr>
<td>3/4/2020</td>
<td>Opportunistic Infections</td>
<td>Mediwal/Raux</td>
</tr>
<tr>
<td>3/11/2020</td>
<td>Tox I</td>
<td>Stephanie Barre</td>
</tr>
<tr>
<td>3/18/2020</td>
<td>Tox II</td>
<td>Christian Hauser</td>
</tr>
<tr>
<td>3/25/2020</td>
<td>Pulmonary Hypertension</td>
<td>Joe Mazur</td>
</tr>
<tr>
<td>4/1/2020</td>
<td>NMS, Malignant Hyperthermia</td>
<td>Jackie Hawn</td>
</tr>
<tr>
<td>4/8/2020</td>
<td>Oncologic Emergencies</td>
<td>Jessica McElwee</td>
</tr>
<tr>
<td>4/15/2020</td>
<td>Endocrine Emergencies</td>
<td>Chara Calhoun</td>
</tr>
<tr>
<td>4/22/2020</td>
<td>Antimicrobial Resistance and</td>
<td>Mediwal/Raux</td>
</tr>
<tr>
<td></td>
<td>Combination Therapy</td>
<td></td>
</tr>
<tr>
<td>4/29/2020</td>
<td>Nutrition</td>
<td>Emily (RD)</td>
</tr>
<tr>
<td>5/6/2020</td>
<td>Burn</td>
<td>Melanie Smith</td>
</tr>
<tr>
<td>5/13/2020</td>
<td>End of Life Care</td>
<td>Ron Neyens</td>
</tr>
</tbody>
</table>
Critical Care Resident Program Timeline

**July**
- Orientation
- Advisor program
  - Set advisor meeting by **July 15, 2019**
- Resident Development Plan
  - Complete and submit via PharmAcademic by **July 31, 2019**
- Society of Critical Care Medicine (SCCM)
  - Consider submitting an abstract by deadline **August 1, 2019**
  - Meeting February 16-19, 2020 in Orlando, FL
- Research project (list to be distributed via email by research committee)
  - Select topic and schedule meeting with project preceptor(s) by **July 31, 2019**
  - Ensure CITI-training is complete by **July 31, 2019**
- MUE
  - Topic will be assigned, but schedule meeting with project preceptor(s) by **July 15, 2019**
- Critical Care Lecture Series
  - Select 3 topics to present, notify listed preceptor(s), and discuss required timelines by **July 31, 2019**

**August**
- Rotations and On-call begin (will begin in July for PGY1 residents returning as a PGY2 critical care)
- Select longitudinal committee membership by **August 31, 2019**
- Research project
  - Finalize literature search and submit research project timeline to mentor by **August 15, 2019**
  - Begin REDCap data collection database
  - Submit IRB (if not already completed)
  - Begin SPARC data request (if utilizing and not already completed)
  - Meet with biostatistician- Dr. Weeda, Dr. Pilch (if utilizing)
- Seminar
  - Identify topic and approve with RPD, advisor, and preceptor(s) by **August 31, 2019**

**September**
- Research project
  - Present to research committee **(DATE???)**
  - Submit IRB revisions as necessary to meet research committee requests
  - Begin initial manuscript draft (Intro/background and methods)
  - Begin data collection once IRB secured
- MUE
  - Complete MUE data collection by **September 30, 2019**
  - Initiate discussions with preceptor(s) regarding next steps (committee presentation, protocol revisions, protocol implementation, etc…)
- Seminar

*Updated July 2019*
Submit seminar timeline to project preceptor(s) by September 15, 2019

October
- Midyear preparation
  - Explore interested institutions as potential future employer
  - Update Curriculum Vitae
- Research project
  - Continue data collection
- Quarterly Evaluation (July 1 – September 30)
  - Completed and submitted to RPD and advisor by October 20, 2019

November
- Research project
  - Continue data collection

December
- American Society of Health-System Pharmacists (ASHP)
  - Meeting December 8-12 in Las Vegas, NV
- Research project
  - Complete data collection by December 31, 2019
  - Complete initial manuscript draft (Intro/background and methods) by December 31, 2019
  - Prepare for data analysis

January
- Research project
  - Continue data analysis
- Quarterly Evaluation (October 1 – December 31)
  - Completed and submitted to RPD and advisor by January 20, 2020

February
- SCCM
  - Attend and get involved—a clinical pearl presentation is expected within the critical care lecture series upon return
- Research project
  - Finish data analysis by February 29, 2020
  - Continue manuscript—begin results and discussion

March

April
- Quarterly Evaluation (January 1 – March 31)
  - Completed and submitted to RPD and advisor by April 20, 2020

May
- Quarterly Evaluation (April 1 – June 30)
  - Completed and submitted to RPD and advisor by June 23, 2020
Critical Care Supplemental Educational Resources

Clinical Pearls: maintained and assigned by Melanie Smith and Carolyn Magee

- N:\Pharmacy Schedule\Clinical Resources & Monitoring Programs\Clinical Pearls


- GREAT resource for reading up on landmark trials for specific topics. Go to studies >> top studies or major studies >> review by system or disease state. Perfect place to start for topic discussions.
- Sign up for the weekly newsletter! They send you the top trials and reviews that were published the last week. This is an excellent way to stay on top of new literature coming out.

EMCrit - https://emcrit.org/

- Excellent site for reviews of recently published guidelines and articles
- Great place to get an alternative view on trials and to help you dissect the trials and come up with critique (think journal clubs!)
- Fully searchable so you can look for topics that don’t immediately pop up

PulmCCM - https://pulmccm.org/

- Has quick review topics not as thorough but good overviews
- Wide range of CC topics but more focused on the medicine population
- Sign up for the weekly email!

Cardiology - http://cardiologytrials.org/

- Pretty extensive list of all the major trials for various cardiology interventions
- Gives you a quick one liner about each trial as well as a full journal club style writeup
- This will save your life on Cardiology rotations!

The Bottom Line - http://www.thebottomline.org.uk/

- This is a great resource for summaries of landmark trials. It is laid out like journal clubs
- I encourage you to read the article and make your own assessment and then look up the assessment on the bottom line to see if you picked up on all of the issues they highlight

Life In the Fast Lane - https://lifeinthefastlane.com/ccc/

- This is a good starting point for learning about more general ICU topics (ex: steroids in septic shock, acid base, etc…). It often will provide links to helpful articles related to the topic.
Podcasts

- EMCrit
- ICU Rounds
- The Elective Rotation: A critical care hospital pharmacy podcast
- Critical Care Reviews
- ACCRaC
- Critical Care Practitioner
INTRODUCTION

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children's hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state's only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state’s only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org.

The Department of Pharmacy Services provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies to fulfill the department's mission, vision, and goals of providing optimal. The Medication Safety, Use & Policy division incorporates three separate work groups including Drug Information Services, Medication Safety, Policy & Procedures, and Data and Outcomes Management. For this residency program, the resident will participate in all areas.

PURPOSE

The Postgraduate Year Two (PGY2) Drug Information Residency Program is designed to develop accountability; practice patterns; habits; and expert knowledge, skills, attitudes, and abilities in the respective advanced area of pharmacy practice. The Drug Information Residency Program builds upon the broad-based competencies achieved in a PGY1 residency, deepening the resident’s ability to provide care in the most complex of cases or in the support of care through practice leadership. Therefore, this residency provides the resident with opportunities to function independently as a practitioner by conceptualizing and integrating accumulated experience and knowledge and transforming both into improved medication therapy for patients.

This specialty residency is designed to develop practitioners who possess an expert level of competency in drug information practice as well as informatics and outcomes management. The
program allows sufficient flexibility to adapt to the individual needs of the resident, while ensuring that all ASHP standards for drug information specialized residency training are met. Upon completion of this program, the resident will be prepared to enter a variety of positions related to drug information practice, including but not limited to: clinical specialist in drug information, medication use policy, medication safety or outcomes; faculty member in a relevant field, coordinator of Drug Information Services (or similar area), medical writing, industry, or pharmacy information systems.

Additionally, upon completion of the PGY2 program, the resident should possess competencies that enable attainment of board certification. The intended outcomes are as follows:
INTENDED OUTCOMES

- Demonstrate excellence in the provision of education, training, and evidence-based information for health care professionals and health care professionals in training.
- Contribute to the management of the organization’s medication-use policies or processes.
- Exercise leadership and practice management skills.
- Demonstrate excellence in the provision of evidence-based information and education.
- Contribute to the management of a drug information center/service.
- Conduct drug information practice-related projects.
- Contribute to the management of the organization’s medication-use process.
- Demonstrate skills required to function in an academic setting.
- Contribute to the organization’s decisions for the selection of medication-related devices.
- Demonstrate skills required to participate in the maintenance of pharmacy information systems.

THE RESIDENCY EXPERIENCE

Activities will include providing drug information services to health professionals and consumers through a variety of experiences. Specific activities include staffing in a call center; preparation of scientifically based, unbiased drug evaluations for the Pharmacy and Therapeutics Committee; management of the hospital formulary system; participation in ongoing medication use evaluations; and preparation of drug therapy newsletters. The resident will also participate adverse reaction surveillance and administrative and management activities of drug information services; assist with the maintenance of the information systems; and provide educational programs for the hospital staff and students at the Medical University.

In addition to drug information activities, the resident is required to complete at least 2 elective learning experiences, to present one formal seminar, to present one didactic lecture, and to participate in the department’s ongoing clinical service programs (See Table 1). The resident will also complete a residency service project. The majority of experiences are longitudinal in nature to simulate the work experience following graduation. On successful completion of the program, the resident will receive a Certificate of Residency in Drug Information Practice from the Medical University of South Carolina.

Table 1. Learning Experiences

<table>
<thead>
<tr>
<th>PROPOSED LEARNING MODULES</th>
<th>PerIOD</th>
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</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>1 month</td>
</tr>
<tr>
<td>Drug Information</td>
<td>11 to 12 months (longitudinal)</td>
</tr>
<tr>
<td>Drug Information – Precepting</td>
<td>2 months</td>
</tr>
<tr>
<td>Medication Safety</td>
<td>4 to 6 weeks</td>
</tr>
<tr>
<td>Medication Safety, Use &amp; Policy</td>
<td>1 month or longitudinal</td>
</tr>
<tr>
<td>Formulary Management (P&amp;T)</td>
<td>2 to 3 months</td>
</tr>
<tr>
<td>Informatics</td>
<td>4 to 6 weeks (or longitudinal)</td>
</tr>
<tr>
<td>Service project and manuscript</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Medication use evaluation</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Complete an MUE and/or coordinate an MUE</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td>1 presentation</td>
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</table>
**PROPOSED LEARNING MODULES**

<table>
<thead>
<tr>
<th>Module</th>
<th>Hours/Time</th>
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</thead>
<tbody>
<tr>
<td>Operational staffing</td>
<td>Up to 32 hours/month</td>
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</table>

**ELECTIVE LEARNING EXPERIENCES**

<table>
<thead>
<tr>
<th>Experience</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Information – Teaching (Academia)</td>
<td>1 semester</td>
</tr>
<tr>
<td>Clinic experience</td>
<td>Half day per week (longitudinal)</td>
</tr>
</tbody>
</table>

**PRECEPTORS**

Each clinical preceptor will be responsible for the coordination of their own learning experience. The preceptor will modify the learning experience accordingly, with the assistance of the residency program director (RPD), should the resident need remediation as far as residency goals are concerned. The residency preceptor will exhibit the characteristics and aptitude necessary for residency training including the mastery of the four preceptor roles fulfilled when teaching clinical problem solving (i.e., direct instruction, modeling, coaching and facilitation). The residency preceptor will guide and monitor the resident’s activities and service throughout the learning experience. The residency preceptor will provide ongoing formative and summative evaluations of the resident’s performance, with the goal of advancing the resident’s competency on the specific goals assigned to the experience. The preceptors listed in Table 2 will be responsible for the required and elective learning experiences for this program. The resident may work with other preceptors/staff throughout the department depending on the learning experience/project assigned.

The specific preceptor responsibilities are as follows:

- Understand the resident’s responsibilities to the residency teaching experience and to ongoing activities such as projects, talks, student discussions, manuscript preparation.
- Develop and maintain goals and objectives for the specific residency teaching learning experience(s).
- Review the resident’s training plan and resident’s previous performance and modify the learning experience accordingly.
- Orient the resident to the rotation’s setting and monitor/evaluate/critique the resident’s performance during the experience.
- Provide the resident a midpoint in written and verbal format, and be able to complete the final summary PharmAcademic evaluation by month’s end as outlined in the residency manual.
- Advise the RPD of any appropriate interventions that may be needed relevant to the resident’s performance.
- Participate in an annual feedback session in which preceptors and the RPD consider overall program changes based on evaluations, observations, and direct resident feedback and surveys.
### Table 2. Program Preceptors

<table>
<thead>
<tr>
<th>PROGRAM PRECEPTORS</th>
<th>PROGRAM PRECEPTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeff Brittain, PharmD, BCPS</td>
<td>Chris Wisniewski, PharmD, BCPS</td>
</tr>
<tr>
<td>Clinical Pharmacist, Drug Policy/Informatics</td>
<td>Clinical Specialist, Drug Information</td>
</tr>
<tr>
<td>Adjunct Assistant Professor, SCCP-MUSC Campus</td>
<td>Associate Professor, SCCP-MUSC Campus</td>
</tr>
<tr>
<td>Genevieve (Jeni) Hayes, PharmD, BCPS</td>
<td>Dixie Runey, PharmD</td>
</tr>
<tr>
<td>Clinical Specialist, Outcomes Management</td>
<td>Clinical Pharmacist,</td>
</tr>
<tr>
<td>Adjunct Assistant Professor, SCCP-MUSC Campus</td>
<td>Medication Safety, Use &amp; Policy</td>
</tr>
<tr>
<td>James New, PharmD, BCPS</td>
<td>Shelby Stricklin, PharmD</td>
</tr>
<tr>
<td>Clinical Specialist, Drug Information</td>
<td>Coordinator, Medication Safety</td>
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<tr>
<td>Adjunct Assistant Professor, SCCP-MUSC Campus</td>
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</tr>
<tr>
<td>Matt Hebbard, PharmD</td>
<td></td>
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<tr>
<td>Clinical Pharmacist,</td>
<td></td>
</tr>
<tr>
<td>Medication Safety, Use &amp; Policy</td>
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</tr>
</tbody>
</table>

**RESIDENCY ADVISOR**

A Residency Advisor may be appointed by the RPD and is responsible for the supervision, guidance and on-going evaluation of the resident’s progress throughout the residency. The advisors also provides an informal professional mentoring role (examples include preparation for future career planning roles, advice on other issues that maybe impacting on the resident’s performance).

**RESIDENT RESPONSIBILITIES**

The residents’ role is that of a student, novice practitioner, and emerging clinician and/or administrator. The resident is to participate in ongoing clinical and administrative services with the assistance of the residency preceptor and develop their skill set into a competent clinical practitioner and/or future administrator. The resident must accept and apply qualitative feedback in addition to performing self-evaluations on their performance.

In order to promote an effective and productive residency experience, the relationship between a resident and rotation preceptor must be highly communicative. Specifically, the resident will:

- Sign off on the learning experience orientation form on the first day of each new rotation,
- Maintain strict deadlines as far as PharmAcademic requirements are concerned – outlined in the MUSC Residency Manual,
- Understand the preceptor’s expectations for daily activities, services provided, and preceptor contact,
- Maintain a project list with associated time lines,
- Participate in department and organizational functions (eg, departmental meetings, divisional staff meetings, Seminars) in accordance to the MUSC Residency Manual and the expectations of the preceptors and RPD
- Provide a detailed account of activities as they relate to the goals and objectives of the learning experience, and
- Maintain active communication with the preceptor, advisor and/or RPD concerning any planned off-service activities (eg, meetings, seminars, projects, staffing) that the resident will be participating in during the rotation.
LONGITUDINAL EXPERIENCES

Clinical Staffing Service

Residents will gain clinical experience providing service throughout the year as a clinical pharmacist. PGY1 residents staff an average of 32 hours per month in one of the inpatient pharmacies (Ashley River Tower, Children’s Hospital, and University Hospital). Residents will be scheduled in a variety of central and decentralized roles so they gain experience providing a wide range of services. Activities include, but are not limited to, order verification, sterile product verification, completing pharmacokinetic monitoring, providing therapeutic consults, attending emergency codes, and delivering patient education.

On Call (optional)
Residents will participate in a Clinical Pharmacy on-call service for daytime, evening, weekend, and holiday coverage. Residents provide 24-hour availability of clinical pharmacy services and patient-specific drug therapy issues to all MUSC Health care team members. Clinical pharmacy specialists serve as a clinical back-up for the residents, and all therapeutic consults must be reviewed by the clinical back-up before recommendations are made by PGY1/PGY2 residents. PGY1/PGY2 residents have both adult and pediatric on call assignments throughout the year, and weekend on-call responsibilities count towards the 32 monthly service hours.

Research Project
Each resident will complete a major service or research project during the residency year. Project ideas will be generated by care team members of MUSC Health to address clinical and operational needs for Pharmacy Services and patients at MUSC Health. The resident will present the results of their project at a local, state, regional, or national meeting, and they must write a manuscript suitable for publication describing the results of their project. Residents will be provided one working day each month during rotation hours to work on the project.

MUE
PGY1 residents will participate in small-group medication use evaluations during the fall to evaluate and implement measures to improve the quality of the medication-use process. Residents will complete an MUE in pairs under the oversight of a clinical and drug information liaison, and they will present their findings at the Vizient Pharmacy Network resident poster session in December as well as at relevant P&T and/or subcommittees at MUSC Health.

Seminar
Each resident will present at least one ACPE-accredited seminar during the residency program. The goal of the seminar is to expand the resident’s communication skills, presentation techniques, and knowledge in a topic of their choosing.

Updated July 2019
Longitudinal Clinic Service (optional)
The PGY2 resident can participate in patient-care activities within an outpatient clinic (e.g., ambulatory care, HIV, Internal Medicine) for 3 to 4 months. Responsibilities are limited to one half-day per week shift, and would include any and all tasks/assignments as designated by the clinic administrator/preceptor.

Optional Certificate Programs
Academician Preparation Program
The MUSC College of Pharmacy offers an optional certificate to residents in the Charleston area who are interested in enhancing skills needed in an academic environment. Residents are assigned a full-time faculty member as a mentor for this program. Additional requirements for APP include providing 2 hours of didactic lecture, developing one complex patient case, facilitating 5 small group discussions and/or laboratory exercises, and serving as the primary preceptor for 2 students on APPE rotations.

Research Certificate Program
The MUSC College of Pharmacy also offers a research certificate program for residents, consisting of live sessions aimed at improving residents’ ability to conduct, disseminate, and interpret research.

LEARNING EXPERIENCE EVALUATIONS AND GRADING
The resident is expected to successfully complete and achieve all of the required outcomes according to ASHP Educational Outcomes, Goals and Objectives for the PGY2 Drug Information Residency and all of the selected elective outcomes. The required outcomes for this program listed in Table 3 should all be achieved for successful completion of the program. Custom outcomes will be available for operational staffing learning experiences.

The resident is expected to demonstrate proficiency in 95% or above of all activities linked to these specific outcomes via the various goals and objectives assigned from the learning experiences to successfully complete the program (see MUSC Residency Manual). The resident will observe, learn, act, and then master a particular activity, which will deem the resident as achieving that goal. This again will be highly individualized and not applied to every resident exactly the same.

Each learning experience will be evaluated using PharmAcademic. A typical evaluation schedule is included in Appendix A. The resident will be assigned formative evaluations through the program as determined through the customized plan process. The formative evaluations may be evaluated through PharmAcademic or as other written/verbal communication (e.g., editorial feedback on a writing assignment). All competencies and assignments/project with associated feedback will be maintained in the resident’s online folder.

Table 3. Outcomes for Successful Completion of the Program

<table>
<thead>
<tr>
<th>REQUIRED OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome R1: Demonstrate excellence in the provision of education, training, and evidence-based information for health care professionals and health care professionals in training.</td>
</tr>
<tr>
<td>Outcome R2: Contribute to the management of the organization’s medication-use policies or processes.</td>
</tr>
<tr>
<td>Outcome R3: Exercise leadership and practice management skills.</td>
</tr>
</tbody>
</table>

Updated July 2019
<table>
<thead>
<tr>
<th>Outcome R4</th>
<th>Conduct drug information practice-related projects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome R5</td>
<td>Contribute to the management of the organization’s budget.</td>
</tr>
<tr>
<td>Outcome E1</td>
<td>Contribute to the management of the organization’s medication-use process.</td>
</tr>
<tr>
<td>Outcome E2</td>
<td>Contribute to the management of a drug information center/service.</td>
</tr>
<tr>
<td>Outcome E3</td>
<td>Demonstrate excellence in the provision of evidence-based information and education for the public.</td>
</tr>
<tr>
<td>Custom 1</td>
<td>Manage and improve the medication-use process</td>
</tr>
<tr>
<td>Custom 2</td>
<td>Provide evidence-based, patient-centered medication therapy management with interdisciplinary teams.</td>
</tr>
<tr>
<td>Custom 6</td>
<td>Utilize medical informatics</td>
</tr>
</tbody>
</table>

**ELECTIVE OUTCOMES**

| Outcome E5 | Demonstrate skills required to function in an academic setting. |
SELECTION OF RESIDENCY CANDIDATES
Potential candidates must complete an application via the PhORCAS online application system by the published deadline each year. Typically, the deadline is December 31st. Details regarding the application process can be found on the MUSC Health Residency Program Website or directly HERE. For the PGY2 Drug Information program, the candidate is asked to submit a writing sample for review as part of the interview process. The content of the writing sample can be the candidate’s choice as it is for the assessment of communication skills.

Candidates that have submitted a complete residency application will be considered for on-site interviews based on established pre-screening criteria. The top 2 to 5 candidates will be offered an on-site interview.

An on-site interview will be conducted with the preceptors for the program, using an established scoring system with behavioral-based questions. Interview scores are collated and added to the pre-interview screening score. Candidates are then ranked and discussed by the Medication Safety, Use & Policy group to determine the final ranking of candidates. For internal and external candidates participating in the NMS Matching Services, the final ranks are submitted by the established deadline.

BENEFITS
- Resident Stipend: Assessed annually and communicated in the welcome letter.
- Leave: 15 days of paid leave for sick time, vacation time, holidays, and interview days. Each PGY1 resident will also receive one paid time off day per month after orientation, with the exception of Clinical Generalist rotation (10 total days). Administrative time is granted for attendance at professional meetings or other duties as determined. Long term leave is available through a combination of paid leave and/or leave without pay, with a maximum of 8 weeks.
- Health Insurance: Medical and dental insurance is available through the MUSC Medical Center.
- Parking: Parking at MUSC Health is available for a monthly charge.
- Technology: Residents will be provided a laptop and a pager to use throughout the year.
- Travel: Each resident is given a stipend to assist in travel expenses for professional meetings as approved by the Director of Graduate Pharmacy Education.

RESIDENCY PROGRAM DIRECTOR CONTACT INFORMATION
Jason C. Cooper, PharmD
Residency Program Director, PGY1/PGY2 Drug Information Residency Programs
Adjunct Assistant Professor, Department of Pharmacy and Clinical Sciences
South Carolina College of Pharmacy - MUSC Campus
Medical University of South Carolina
Department of Pharmacy
Services 150 Ashley Ave; RT Annex 605
MSC 250584
Charleston, SC 29425
Phone: 843-792-2238
Fax: 843-792-5532
E-mail: cooperjc@musc.edu

### APPENDIX A: EVALUATION PLAN

#### Table 1. Required Learning Experiences/Evaluations

<table>
<thead>
<tr>
<th>Learning Experience</th>
<th>Type of Evaluation</th>
<th>Responsible Party</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>ASHP Standard Entering Interests Self-evaluation</td>
<td>Resident</td>
<td>June/July</td>
</tr>
<tr>
<td>NA</td>
<td>Goal-based Entering Interests Self-evaluation</td>
<td>Resident</td>
<td>June/July</td>
</tr>
<tr>
<td>Orientation (if applicable)</td>
<td>Orientation</td>
<td>Resident</td>
<td>End of July</td>
</tr>
<tr>
<td>NA</td>
<td>Customized Plan Word document – copy to PharmAcademic</td>
<td>Resident</td>
<td>July 12 (draft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RPD</td>
<td>July 31 (final)</td>
</tr>
<tr>
<td>This includes the longitudinal evaluation of drug information and medication use policy activities</td>
<td>Quarterly evaluation – summative</td>
<td>RPD</td>
<td>Quarterly</td>
</tr>
<tr>
<td>NA</td>
<td>Quarterly Progress Report</td>
<td>Resident</td>
<td>Quarterly</td>
</tr>
<tr>
<td>NA</td>
<td>Quarterly feedback (custom evaluation)</td>
<td>C Wisniewski J New J Cooper</td>
<td>Quarterly (except for 3rd quarter)</td>
</tr>
<tr>
<td>NA</td>
<td>Quarterly preceptor feedback (custom evaluation)</td>
<td>Resident</td>
<td>Quarterly (except for 3rd quarter)</td>
</tr>
<tr>
<td>Informatics</td>
<td>Summative</td>
<td>Preceptor</td>
<td>Based on availability</td>
</tr>
<tr>
<td>Outcomes Management</td>
<td>Summative</td>
<td>Preceptor</td>
<td>January – February</td>
</tr>
<tr>
<td></td>
<td>Preceptor/learning experience</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-evaluation</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td>Drug Information (Teaching)</td>
<td>Summative</td>
<td>Preceptor</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td>Preceptor/learning experience</td>
<td>Resident</td>
<td>Based on student rotation schedule</td>
</tr>
<tr>
<td></td>
<td>Self-evaluation</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td>Formulary Management (P&amp;T)</td>
<td>Summative</td>
<td>Preceptor</td>
<td>Based on availability</td>
</tr>
<tr>
<td></td>
<td>Preceptor/learning experience</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-evaluation</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td>Medication Safety, Use &amp; Policy</td>
<td>Summative</td>
<td>Preceptor</td>
<td>Based on availability</td>
</tr>
<tr>
<td></td>
<td>Preceptor/learning experience</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-evaluation</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td>Medication Safety</td>
<td>Summative</td>
<td>Preceptor</td>
<td>Based on availability</td>
</tr>
<tr>
<td></td>
<td>Preceptor/learning experience</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-evaluation</td>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td>Manuscript/project</td>
<td>Summative</td>
<td>Project preceptor</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Date Achieved</td>
<td>Required Activities (to receive a residency certificate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>All PGY2 residents have their PGY1 residency certificate on file.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>As is applicable to the specific residency program, residents will complete the ACLS/PALS curriculum and participate in medical emergencies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No NI’s may be present upon graduation of the program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>For PGY1 programs (or applicable PGY2), participate in medication use evaluation(s). Provide a written document with methods, findings, and recommendations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements as assigned.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Present resident project at an approved local, national, regional or state meeting.</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Evaluate 4 Grand Rounds presentations throughout the year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix L

Medical University of South Carolina – MUSC Health
PGY2 Emergency Medicine Residency

Program Description

The PGY2 Emergency Medicine Residency Program is designed to develop accountability; practice patterns; habits; and expert knowledge, skills, attitudes, and abilities in each respective advanced area of Emergency Medicine pharmacy practice. PGY2 Emergency Medicine Residents throughout the year will: acquire the needed knowledge for skillful problem solving of emergency medicine-related issues, refine their problem-solving strategies, strengthen their professional values and attitudes, and advance the growth of their clinical judgment. Specifically, this specialty residency is designed to train pharmacists to care for an emergency medicine patient. Training will be focused in a wide variety of therapeutic areas including critical care, surgery, internal medicine, psychiatry, cardiology and ambulatory care. Therefore, the Emergency Medicine Residency provides residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experiences and knowledge and transforming both into improved medication therapy for patients.

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children's hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state’s only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state’s only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org.
**Purpose Statement**

PGY2 pharmacy residency programs build on Doctor of Pharmacy (Pharm.D.) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if applicable.

**Program Structure**

- On-call and after-hours coverage
- Required Rotations:
  - Pharmacy Orientation (1 month)
    - Limited orientation for residents who did complete PGY1 residency training at MUSC
  - Emergency Medicine (6 months with varying foci)
  - Internal Medicine (1 month)
  - Pediatric Emergency Department (1 month)
  - Longitudinal Pre-Hospital Experience (minimum 1 per quarter)
  - Longitudinal Toxicology Experience
    - Monthly toxicology journal club
    - Two-week Toxicology course in Spring
  - Longitudinal Research Experience
  - Selective Rotations (choose 2 critical care electives)
    - Medical-Surgical Intensive Care (1 month)
    - Surgical Critical Care-Trauma (1 month)
    - Surgical Critical Care-Neurosurgery (1 month)
    - Surgical Critical Care-Cardiothoracic Surgery (1 month)
  - Elective Rotations (the resident can choose 1 from the selective list or the following)
    - Pediatric Emergency Department (1 month)
- Teaching requirements
  - ACPE-accredited seminar (1 hour)
  - Emergency Medicine Physician Conference
  - Critical Care Lecture Series
  - Emergency Medicine Pharmacy School Elective
- Emergency Medicine Protocol/Workflow development
  - Participate in the development of at least one new emergency medicine workflow
  - Present workflow to Department of Emergency Medicine and NursingStaff
- Resident Research Project
  - Design and lead research efforts for a multi-disciplinary emergency medicine research team
  - Abstract is to be submitted to the ASHP Midyear Clinical meeting, SCCM Annual meeting, or ACEP Annual Meeting

- Manuscript
  - Preparation of a manuscript
  - Submitted for publication before the end of the residency year

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All PGY2 residents have their PGY1 residency certificate on file.</td>
</tr>
<tr>
<td></td>
<td>Residents will obtain active certification from the American Heart Association as ACLS/PALS provider and participate in medical emergencies.</td>
</tr>
<tr>
<td></td>
<td>Attain an “Achieved for Residency” on at least 95% of the required and elective objectives for the program as assessed by the RPD on the last quarterly evaluation (June).</td>
</tr>
<tr>
<td></td>
<td>The resident must not have any objectives rated as “Needs Improvement” at the time of graduation.</td>
</tr>
<tr>
<td></td>
<td>Completion of the Academic Preparation Program if not completed during the PGY1 year</td>
</tr>
<tr>
<td></td>
<td>Completion of the Research Certificate Program if not completed during the PGY1 year</td>
</tr>
<tr>
<td></td>
<td>Obtain Emergency Neurologic Life Support Certification</td>
</tr>
<tr>
<td></td>
<td>Complete the Medical School Toxicology Course</td>
</tr>
<tr>
<td></td>
<td>Completion of the residency teaching requirements:</td>
</tr>
<tr>
<td></td>
<td>- Classroom lecture – Emergency Medicine Elective</td>
</tr>
<tr>
<td></td>
<td>- Interdisciplinary lecture – Emergency Medicine Conference</td>
</tr>
<tr>
<td></td>
<td>- Small group presentations – Critical Care Lecture Series</td>
</tr>
<tr>
<td></td>
<td>Develop at least one new Emergency Medicine Protocol/Workflow for implementation</td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations</td>
</tr>
<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE and that meets all of the PGY2 Emergency Medicine Goals and Objectives. Prepare and submit a manuscript for publication in a peer-reviewed biomedical journal prior to graduation. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>Have adequate knowledge of the core therapeutic areas, disease states, and emergency medicine topics identified in the “Required Competency Areas, Goals, and Objectives for Emergency Medicine PGY2 Pharmacy Residencies Appendix” in order to provide patient care and comprehensive pharmacotherapy management.</td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
</tr>
<tr>
<td></td>
<td>Complete all Pharmacy On-call Service requirements as assigned.</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements as assigned.</td>
</tr>
<tr>
<td></td>
<td>Present the project at an approved local and national, regional, or state meeting.</td>
</tr>
</tbody>
</table>
Appendix M

Medical University of South Carolina – MUSC Health
PGY1/2 Health-System Pharmacy Administration & Leadership Residency Program

Program Description

About MUSC Health

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children's hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state’s only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state’s only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org.

Pharmacy Services provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies to fulfill the department’s mission, vision, and goals of providing optimal pharmaceutical care to all patients.

The Health-System Administration & Leadership (HSPAL) Residency is a 24-month post-Doctor of Pharmacy training program. The PGY1 and PGY2 years are designed to flow seamlessly together, with no need to re-apply or participate in the early commitment process.

Residency Program Director

Heather Easterling, PharmD, MBA
Administrator of Pharmacy Services
Director of Graduate Pharmacy Education
Clinical Associate Dean of Medical Center Affairs, South Carolina College of Pharmacy
(843) 792-5691
easterling@musc.edu

Purpose

The Health-System Pharmacy Administration Pharmacy Residency at the Medical University of South Carolina (MUSC) is designed to build on Doctor of Pharmacy (Pharm.D.) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if available. The HSPAL program is specifically designed to develop accountability; practice patterns; habits; and expert knowledge, skills, attitudes, and abilities in pharmacy practice and health system pharmacy leadership. The Health-System Pharmacy Administration Pharmacy Residency begins in the PGY1 year where broad-based competencies are achieved. In the PGY2 year continued training and experience will deepen the resident’s ability to manage and lead the development, implementation and management of a safe and effective medication system. Therefore, the Health-System Pharmacy Administration Pharmacy Residency provides residents with opportunities to function independently as practitioners and leaders by conceptualizing and integrating accumulated experience and knowledge and transforming both into improved medication therapy for patients. The resident will be competent in medication safety, clinical management and operations management and should possess competencies that enable attainment of board certification (i.e. BCPS). Upon completion of the 24-month program the resident will have developed significant professional skills and will be prepared to assume clinical and/or operational management positions in a hospital or health system.

Program Structure

First Year

During the first year, after an extensive one month orientation, training experiences equivalent to the PGY1 program with emphasis in clinical practice (adult medicine, critical care, pediatrics, psychiatry, drug information, and ambulatory care), longitudinal experiences in management, and an administration rotation are provided. The PGY1 residency year provides a fertile environment to manage and improve the medication-use process, provide evidence-based, patient-centered medication therapy management with interdisciplinary teams, exercise leadership and practice management, demonstrate project management skills, provide medication and practice related education and training, and utilize medical informatics. The goals and objectives identified by the ASHP for PGY1 programs will be addressed during the first year of this 24-month program. A complete list of these goals and objectives may be found at http://www.ashp.org/menu/Accreditation/ResidencyAccreditation.
Table 1. Learning Experiences (PGY1)

<table>
<thead>
<tr>
<th>Description</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>1 month (July)</td>
</tr>
<tr>
<td>Management</td>
<td>1 month</td>
</tr>
<tr>
<td>Clinical Generalist</td>
<td>1 month</td>
</tr>
<tr>
<td>Drug Information</td>
<td>1 month</td>
</tr>
<tr>
<td>Critical Care*</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatrics*</td>
<td>1 month</td>
</tr>
<tr>
<td>Psychiatry*</td>
<td>1 month</td>
</tr>
<tr>
<td>Ambulatory Care*</td>
<td>1 month</td>
</tr>
<tr>
<td>Acute Care *</td>
<td>1 month</td>
</tr>
<tr>
<td>Electives</td>
<td>2 months</td>
</tr>
<tr>
<td>Clinical Operations Experience</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Clinical On-call</td>
<td>Longitudinal</td>
</tr>
</tbody>
</table>

*Certain learning experiences are required but selective in that residents may select the specific learning experience under a more general topic.

Selective Learning Experiences: (Must complete one of each):

- Critical Care – 1 month (MSICU, CCU, CTICU, STICU, NeuroICU, MICU, PICU, NICU, Heart/Lung Transplant, Solid Organ Transplant)
- Pediatrics – 1 month (Gen Peds required if no previous pediatric rotations, PICU, NNICU, Peds Heme/Onc)
- Psychiatry – 1 month (Gen Psych, Pediatric Psych, Geriatric Psych)
- Ambulatory Care – 1 month (BMT, Oncology, HIV, UIM, Transplant, CHF, Pharmacotherapy, Family Medicine)
- Acute Care – 1 month (Internal Medicine, Cardiology, Heme/BMT/Oncology, Nephrology Consult)

Electives: 2 months. May select any of the aforementioned rotations, plus the options below:

- Medication Use Policy
- Informatics
- Medication Assistance/Billing and Reimbursement
- Investigational Drug Services

Second Year
During the second year, the HSPAL resident will work collaboratively with the MUSC Medical Center pharmacy management team, lead process improvement projects, provide patient care in a collaborative practice clinic, chair a subcommittee of the P&T committee, and manage human resources and financial resources to develop advanced leadership skills. The resident will be assigned a pharmacy area to manage as well as maintain a half day per week clinical practice in a clinic. The longitudinal structure in the PGY2 year will develop competence in high level managerial, supervisory, and leadership responsibilities. Concentrated experiences or projects with members of the management team will be conducted in the interest area of the resident as well as within the needs of the medical center. The goals and objectives identified by the ASHP for PGY2 HSPAL programs will be addressed during the second year of this 24-month program. A complete list of these goals and objectives may be found at [http://www.ashp.org/menu/Accreditation/ResidencyAccreditation](http://www.ashp.org/menu/Accreditation/ResidencyAccreditation).
# Table 2. Learning Experiences (PGY2)

<table>
<thead>
<tr>
<th>Description</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulatory Pharmacy Services</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Clinical Management</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Director Rotation</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Inpatient Operations</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Medication Safety and Quality</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Medication Use Policy</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Pharmacy Business Office</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Supply Chain Management</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Outcomes Management Elective</td>
<td>Quarterly Rotation</td>
</tr>
<tr>
<td>Project/Manuscript</td>
<td>Longitudinal (annual)</td>
</tr>
<tr>
<td>Clinical Operations Experience</td>
<td>Longitudinal (annual)</td>
</tr>
<tr>
<td>Coordinator Duties</td>
<td>Longitudinal (annual)</td>
</tr>
<tr>
<td>Administrative On-call</td>
<td>One week (numerous)</td>
</tr>
</tbody>
</table>

Rotations will be scheduled as follows in the second year. Based on the resident’s previous experiences, strengths, areas of interest and areas of opportunity, this schedule may be adjusted accordingly.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 1</td>
<td>Administrative On-call</td>
</tr>
<tr>
<td></td>
<td>Clinical Operations Experience</td>
</tr>
<tr>
<td></td>
<td>Coordinator Duties</td>
</tr>
<tr>
<td></td>
<td>Supply Chain Management</td>
</tr>
<tr>
<td></td>
<td>Inpatient Operations</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>Administrative On-call</td>
</tr>
<tr>
<td></td>
<td>Clinical Operations Experience</td>
</tr>
<tr>
<td></td>
<td>Coordinator Duties</td>
</tr>
<tr>
<td></td>
<td>Project/Manuscript</td>
</tr>
<tr>
<td></td>
<td>Clinical Management</td>
</tr>
<tr>
<td></td>
<td>Ambulatory Pharmacy Services</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>Administrative On-call</td>
</tr>
<tr>
<td></td>
<td>Clinical Operations Experience</td>
</tr>
<tr>
<td></td>
<td>Coordinator Duties</td>
</tr>
<tr>
<td></td>
<td>Project/Manuscript</td>
</tr>
<tr>
<td></td>
<td>Pharmacy Business</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>Administrative On-call</td>
</tr>
<tr>
<td></td>
<td>Clinical Operations Experience</td>
</tr>
<tr>
<td></td>
<td>Coordinator Duties</td>
</tr>
<tr>
<td></td>
<td>Project/Manuscript</td>
</tr>
<tr>
<td></td>
<td>Medication Safety, Quality &amp; Policy</td>
</tr>
<tr>
<td></td>
<td>Administrator Rotation</td>
</tr>
</tbody>
</table>
Outcomes

Specific residency objectives will be established in the beginning of the residency modified according to the resident’s interests and previous experiences and advisor input. To meet the purpose of the residency, the resident will advance to achieve the following outcomes:

- Design, implement, and manage a safe and effective medication-use system.
- Apply contemporary quality methodology to the management of pharmacy services.
- Lead and manage the health system pharmacy’s human resources
- Manage the health system pharmacy financial performance within the context of the broader health system
- Leverage technology and automated systems to optimize the medication-use system

- Demonstrate personal leadership qualities and business acumen essential to operate effectively within the health system and advance the profession of pharmacy practice
- Demonstrate skills required to function in an academic setting

Preceptors

Preceptors during the PGY1 year mirror those available to all PGY1 residents. Preceptors during the PGY2 year primarily include the members of the management team. Some may not have a formal evaluation of the resident assigned in PharmAcademic but all managers interact regularly with the PGY2 HSLA resident.

<table>
<thead>
<tr>
<th>Name and credentials</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heather Easterling, PharmD, MBA</td>
<td>Administrator, Department of Pharmacy Services</td>
</tr>
<tr>
<td>Carolyn Bondarenka, PharmD, MBA, BCPS</td>
<td>Manager, Infusion Pharmacy Services</td>
</tr>
<tr>
<td>Jeff Brittain, PharmD, BCPS</td>
<td>Director, Pharmacy Support Services</td>
</tr>
<tr>
<td>Kelly Crowley, BS, PharmD</td>
<td>Director, Ambulatory Pharmacy Services</td>
</tr>
<tr>
<td>David Cruse, PharmD</td>
<td>Manager, Pharmacy Specialty Services</td>
</tr>
<tr>
<td>Brenda Fauteux, BS, PharmD</td>
<td>Manager, Retail Pharmacy Services</td>
</tr>
<tr>
<td>Nik Lawson, PharmD, MBA, BCPS</td>
<td>Manager, Inpatient Manager</td>
</tr>
<tr>
<td>Joel Melroy, PharmD, MS, BCPS</td>
<td>Director, Inpatient Pharmacy Services</td>
</tr>
<tr>
<td>Jason Mills, PharmD, MBA</td>
<td>Manager, Pharmacy Supply Chain</td>
</tr>
<tr>
<td>Dawn Rooke, MBA</td>
<td>Director, Pharmacy Business Services</td>
</tr>
</tbody>
</table>

The resident will also have significant interactions with the following staff members:
Stephanie Mackey, Administrative Assistant, Pharmacy Residency Programs
Susan Sykes, Administrative Assistant to Dr. Easterling
Evaluation Method
Evaluation procedures are outlined in the residency manual. The resident is expected to actively participate in their own self-evaluation as well as evaluate learning experiences and preceptors.
During the PGY2 year, the HSPLA residency is set up to be longitudinal with “mini-rotations” throughout the year. Experiences are designed to meet the needs of the resident and the department. Management team members and other preceptors as applicable will be assigned criteria-based evaluations throughout the year to assess the resident for various activities. The resident will also be required to self-assess and evaluate the learning experience and preceptor. Quarterly, the RPD will gather all evaluations and meet with the resident to assess competency and achievement of the RLS goals. Weekly, the resident will meet with the RPD and keep a running list of all projects and activities. These activities will be matched to the RLS objectives. In this manner, the resident will be assured to be presented with the opportunity to attain all RLS objectives by the end of the PGY2 year.

Checklist for Attainment of the Residency Certificate

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident will complete the ACLS curriculum and participate in medical emergencies.</td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the Goals and Objectives for PGY1 and PGY2 HSPLA as assessed by the RPD on the last quarterly evaluation (June).</td>
</tr>
<tr>
<td></td>
<td>No NI’s may be present upon graduation of the program.</td>
</tr>
<tr>
<td></td>
<td>Resident has a business plan or ROI document.</td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations</td>
</tr>
<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Complete 2 service or research projects designed to improve the services of the Pharmacy ICCE in each year (PGY1 and PGY2). Prepare 2 manuscripts suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>Prepare and present 2 ACPE-approved continuing education seminars.</td>
</tr>
<tr>
<td></td>
<td>Participate in the Pharmacy On-call Service. In the second year, the HSPLA resident will participate in the Pharmacy AOC call schedule.</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements: PGY1 residents are required to work on average 32 hours per month (including weekend on-call assignments). PGY2s are required to work 16 hours per month.</td>
</tr>
<tr>
<td></td>
<td>Present the projects at an approved local, national, regional or state meeting.</td>
</tr>
<tr>
<td></td>
<td>Complete 8 Grand Rounds evaluations (4 in each year)</td>
</tr>
</tbody>
</table>
Appendix N

Medical University of South Carolina – MUSC Health
PGY2 Infectious Disease Residency Program

INTRODUCTION

About MUSC Health

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state's only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians' practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state's only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children's hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state's only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state's only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org.

The Department of Pharmacy Services provides service to patients on a 24 hour basis through multiple inpatient and ambulatory pharmacies to fulfill the department's mission, vision, and goals of providing optimal pharmaceutical care to all patients.

The Infectious Diseases pharmacy residency at the Medical University of South Carolina is a specialized residency consisting of 12 months of training and experience in various practice areas in infectious diseases including antimicrobial stewardship and immunocompromised hosts. The program allows sufficient flexibility to adapt to the interests and needs of the individual resident, yet provides the basic foundation for quality clinical practice in infectious diseases. The resident will have the opportunity to gain clinical, research, and teaching experience in infectious diseases. Upon completion of this comprehensive program, the resident will be prepared to enter a clinical practice position or a fellowship program.
PURPOSE

The Postgraduate Year Two (PGY2) Infectious Diseases Pharmacy Residency Program is designed to develop accountability; practice patterns; habits; and expert knowledge, skills, attitudes, and abilities in the respective advanced area of pharmacy practice. The Infectious Diseases Pharmacy Residency Program builds upon the broad-based competencies achieved in a PGY1 residency, deepening the resident's ability to provide care in the most complex of cases or in the support of care through practice leadership. Therefore, the Infectious Diseases Pharmacy Residency Program provides residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and transforming both into improved medication therapy for patients. A resident who successfully completes the PGY2 Infectious Diseases Pharmacy Residency Program should be prepared to enter into a clinical practice position in a hospital-based environment or a combination of academia and practice affiliated with a College of Pharmacy. They should also possess the competencies that enable attainment of board certification in the practice area (i.e., Board Certified Infectious Diseases Pharmacist).

GOALS OF THE RESIDENCY

Specific residency goals and objectives will be established in the beginning of the residency modified according to the resident's interests and previous experiences and advisor input. To meet the purpose of the residency, the resident will advance to achieve the following outcomes:

- Serve as an authoritative resource on the optimal use of medications in patients with infectious diseases.
- Optimize the outcomes of infectious diseases patients by promoting and/or providing evidence-based medication therapy as an integral member of an interdisciplinary team in acute and ambulatory care settings.
- Optimizing clinical outcomes while minimizing unintended consequences of antimicrobial use through antimicrobial stewardship.
- Manage and improve the medication-use process in patients with known or suspected infectious diseases.
- Demonstrate leadership and practice management skills.
- Demonstrate excellence in the provision of training or educational activities about anti-infective agents for health care professionals and health care professionals in training.
- Conduct research and contribute to the medical literature in the infectious diseases arena.
- Contribute to formulary decisions regarding anti-infective agents and participate on the Anti-infective Subcommittee of the Pharmacy and Therapeutics Committee.
- Demonstrate skills required to function in an academic setting.
THE RESIDENCY EXPERIENCE

The resident will have the opportunity to gain clinical, research, and teaching experience in infectious diseases. The breadth of experience provided by this residency program will allow successful candidates to work in any facet of infectious diseases. The residency is designed to provide a diverse experience, while focusing on the needs of the individual resident. Residents may tailor elective rotations to meet their particular goals and career needs. In addition to month-long rotations, residents will have several longitudinal experiences including staffing, HIV/ID clinic, and adult on-call. The adult on-call experience is a 24-hour program that allows for PGY2 residents to refine their knowledge base and become proficient in, but not limited to, the following areas: time management, drug information search strategies and literature evaluation, communication, pharmacokinetics, and antibiotic initiation and follow up. Residents are provided with formal written evaluations following each monthly rotation in order to provide for an optimal experience. Residents will complete a quarterly self-evaluation to assure compliance with self-determined goals and the ASHP Residency Learning System. The resident must have previously completed a pharmacy practice residency or have an equivalent level of experience in hospital pharmacy practice prior to entering this specialized residency program.

Rotations

Required core rotations for 1 to 3 months are available in the following areas:

- Adult Infectious Diseases Consult Service 3 months
- Antimicrobial Stewardship Service 2-3 months
- Infectious Diseases (HIV) Clinic 11 months (longitudinal)
- Microbiology Lab 1 month
- Electives* 3-4 month

*Electives include, but are not limited to, the following month long rotations:
- Medical Intensive Care
- Pediatric Infectious Diseases Consult Service
- Pulmonary Medicine
- Transplant Infectious Disease Service
- Medication Use Policy and Informatics
- Emergency Medicine

Core Disease-specific Index

- Bone and joint infections
- Cardiovascular infections
- Central nervous system infections
- Fever of unknown origin
- Fungal infections
- Gastrointestinal infections
- Hepatitis B

- Hepatitis C
- HIV-infection and AIDS

• Intra-abdominal infections
• Neutropenic fever
• Ophthalmologic infections
• Opportunistic infections in immunocompromised hosts
• Parasitic infections
• Reproductive organ infections
• Respiratory infections: upper and lower
• Rickettsial infections
• Sepsis
• Sexually transmitted diseases
• Skin and soft tissue infections
• Tuberculosis and other mycobacterial Infections
• Travel medicine
• Urologic infections
• Viral infection

CORE PRECEPTORS

• Krutika N. Mediwala, PharmD, BCPS, BCIDP; Clinical Pharmacy Specialist, Infectious Diseases/Antimicrobial Stewardship; Affiliate Assistant Professor
• Brian R. Raux, PharmD, BCPS, BCIDP; Clinical Pharmacy Specialist, Infectious Diseases/Antimicrobial Stewardship; Affiliate Assistant Professor
• Joseph Mazur, PharmD, BCPS, BCNSP; Clinical Manager; Clinical Pharmacy Specialist, MICU; Clinical Assistant Professor; Residency Program Director for Critical Care
• Wendy Bullington, PharmD, BCPS; Clinical Pharmacy Specialist, Pulmonary/ Emergency Medicine; Clinical Assistant Professor; Residency Program Director for Pharmacotherapy; Medicine Clinical Coordinator
• Lisa Steed, Ph.D.; Director, Clinical Microbiology Laboratory; Professor; Pathology and Laboratory Medicine
• Genevieve Hayes, PharmD, MS, BCPS; Manager, Medication Use Policy and Informatics; Clinical Assistant Professor
• Amanda L. Parks, MD; Assistant Professor, Department of Infectious Diseases, College of Medicine
• John W. Gnann Jr., MD; Professor, Department of Infectious Diseases, College of Medicine
• Terry R. Dixon, MD, PhD; Assistant Professor, Department of Pediatrics

TEACHING

Teaching certificate programming available through the Academic Preparation Program (APP).
• Didactic lectures in infectious diseases related areas within the college of pharmacy.
• In-services to pharmacy, medical, and nursing staff (inpatient and outpatient).
• Co-preceptor of PharmD students and PGY1 residents on rotations.
## PROGRAM CHECKLIST

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All PGY2 residents have their PGY1 residency certificate on file.</td>
</tr>
<tr>
<td></td>
<td>As is applicable to the specific residency program, residents will complete the ACLS/PALS curriculum and participate in medical emergencies.</td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June). No NI’s may be present upon graduation of the program.</td>
</tr>
<tr>
<td></td>
<td>If participating, complete all requirements of the Academician Preparation Program (APP)</td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations</td>
</tr>
<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Participate in medication use evaluation(s). Provide a written document with methods, findings, and recommendations.</td>
</tr>
<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
</tr>
<tr>
<td></td>
<td>Complete all Pharmacy On-call Service requirements as assigned.</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements as assigned.</td>
</tr>
<tr>
<td></td>
<td>Present research/MUE project at an approved local, national, regional or state meeting.</td>
</tr>
<tr>
<td></td>
<td>Evaluate 4 Grand Rounds presentations throughout the year</td>
</tr>
</tbody>
</table>

**PGY2 Specific:**

- Establish competency in Core Disease-specific Indications
- Prepare and present educational content for the Infectious Diseases department
- Participate in ID-related professional development

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**On-site interviews will be required.**

**For Further Information Contact:**

**Krutika N. Mediwala, PharmD, BCPS, BCIDP**

Clinical Pharmacy Specialist, Infectious Diseases/Antimicrobial Stewardship
Affiliate Assistant Professor, MUSC College of Pharmacy
MUSC Health
150 Ashley Avenue, MSC 584
Charleston, SC 29425

**Office:** 843-876-0587
**Pager:** 13319
Appendix O

Medical University of South Carolina – MUSC Health
PGY2 Internal Medicine Pharmacy Residency Program

Introduction

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

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The Department of Pharmacy Services provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies to fulfill the department’s mission, vision, and goals of providing optimal pharmaceutical care to all patients. Internal medicine pharmacy services are provided by clinical pharmacy specialists and clinical pharmacists for 5 private hospitalist services and 5 teaching services.

Residency Program Director

Kathryn Noyes, PharmD, BCPS 150
Ashley Avenue, MSC 584
Charleston, SC 29425
noyes@musc.edu
Program Purpose Statement

The Postgraduate Year Two (PGY2) Internal Medicine Residency Program is a one-year postgraduate training program designed to build upon competencies achieved in a PGY1 Pharmacy Practice Residency developing specialized areas of practice providing care for a variety of complex acutely ill patients. PGY2 Internal Medicine residency provides residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete the program are prepared to successfully practice as an internal medicine pharmacy specialist or subspecialist in an area of interest as an integral member of an interprofessional health care team. Residents will also be prepared to pursue a career in a health system or academia and engage in educational or scholarly pursuits.

Intended Program Outcomes

As an ASHP-accredited training program, the following outcomes are required. Additional elective outcomes set forth in the ASHP description of PGY2 residencies in internal medicine or selected by the individual resident, may be included.

- In collaboration with the health care team, provide safe and effective patient care to internal medicine patients following a consistent patient care process.
- Ensure continuity of care during internal medicine patient transitions between care settings.
- Demonstrate ability to manage formulary and medication-use processes for internal medicine patients, as applicable to the organization.
- Demonstrate ability to conduct a quality improvement or research project.
- Demonstrate leadership skills for successful self-development in the provision of care for internal medicine patients.
- Demonstrate management skills in the provision of care for internal medicine patients.
- Provide effective medication and practice-related education to internal medicine patients, caregivers, health care professionals, students, and the public (individuals and groups).
- Effectively employ appropriate preceptor roles when engaged in teaching students, pharmacy technicians, or fellow health care professionals in internal medicine.
Residency Program Structure

Residents not completing a PGY1 at MUSC will receive orientation and training during the month of July. Residents matching from within the MUSC PGY1 program will be assigned to a clinical rotation in July. Rotations will generally be sequenced to begin with Internal Medicine for 1-2 month block. The resident will have additional internal medicine rotations interspersed throughout the year as 1 month experiences or blocks. During at least 1 IM rotation, the resident is expected to follow 2 teams (3rd month or later). Closely precepted subspecialty areas of interest will be scheduled prior to December to the greatest extent possible. Areas with a less well-defined pharmacy presence will not be assigned until the RPD and preceptor judge that the resident is able to accurately identify knowledge gaps and an appropriate learning experience description has been developed. The resident may select a research or academia experience during the month of December. Overall, the sequence and elective experiences are scheduled based on the resident’s interests and needs.

Additional experiences will include delivering an ACPE-accredited seminar and optional RITE, completing longitudinal research project and MUE with the mentorship of one or more research advisors, participating in the adult inpatient pharmacy on-call service, and be actively involved in precepting, teaching, and committees. The resident(s) will be responsible for coordinating the Medicine Journal Club and Medicine Team Teaching experiences. The resident may also elect to participate in the Academician Preparation Program and Research Certificate Program.

<table>
<thead>
<tr>
<th>Rotations and Learning Experiences</th>
<th>Length</th>
<th>Preceptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine*</td>
<td>4 months (divided into 1-2 month blocks)</td>
<td>Nicole Bohm, PharmD, BCPS Tracie Delay, PharmD, BCPS</td>
</tr>
<tr>
<td>Infectious Disease*</td>
<td>1 month</td>
<td>Krutika Mediwala, PharmD, BCPS, BCIDP Brian Raux, PharmD, BCPS</td>
</tr>
<tr>
<td>Pulmonary Medicine*</td>
<td>1 month</td>
<td>Wendy Bullington, PharmD, BCPS</td>
</tr>
<tr>
<td>ACPE accredited Seminar*</td>
<td>Concentrated</td>
<td>Varies as appropriate</td>
</tr>
<tr>
<td>Adult Inpatient On Call Service*</td>
<td>Longitudinal</td>
<td>Varies as appropriate</td>
</tr>
<tr>
<td>Clinical Operations* (Ashley River Tower or University Hospital)</td>
<td>Longitudinal (16 hours monthly)</td>
<td>Sarah Harrison, PharmD, BCCCP Holly Meadows, PharmD, BCPS Kathryn Noyes, PharmD, BCPS</td>
</tr>
<tr>
<td>Research Project*</td>
<td>Longitudinal</td>
<td>Varies as appropriate</td>
</tr>
<tr>
<td>MUE</td>
<td>Concentrated</td>
<td>Varies as appropriate</td>
</tr>
<tr>
<td>Research/Academia</td>
<td>December Elective</td>
<td>Varies as appropriate</td>
</tr>
<tr>
<td>Cardiology, Heart Failure</td>
<td>Elective</td>
<td>Holly Meadows, PharmD, BCPS Jean Nappi, PharmD, FCCP, BCPS AQ Cardiology Barbara Wiggins, PharmD, CLS, BCPS, BCCCP, FNLA, FAHA, FCCP, FACC</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>Elective</td>
<td>Kyle Weant, PharmD, BCPS, FCCP</td>
</tr>
</tbody>
</table>
## RPD Expectations of Preceptors

Clinical preceptors are responsible for:

- Coordination of the learning experience, including development and maintenance of the rotation description
- Modification of the learning experience (with the assistance of the RPD) should the resident need to focus on a specific goal
- Documentation of expectations during the rotation orientation.
- Guiding and monitoring the resident’s activity and service
- Providing ongoing formative feedback
- Completing midpoint and final summative evaluations of the resident’s performance, with the goal of advancing the resident’s competency on the specific goals assigned to the experience and progress toward successful completion of the residency program
- Assessing the resident’s self-evaluation
- Soliciting feedback from the resident regarding the rotation experience and actively reviewing resident evaluations of the preceptor and rotationsite
- Advising the RPD of any interventions that may be needed or substandard performance immediately.
- Providing relevant updates regarding resident performance and progress at the monthly internal medicine group meetings
- Actively participating in annual feedback session in which preceptors and the RPD consider overall program changes based on evaluations, observations, and direct resident feedback.

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**Critical Care**  
(Medical, Medical Surgical, Neurocritical, or Cardiovascular Intensive Care)

| Elective          | Jaclyn Hawn, PharmD  
|-------------------|----------------------|
|                   | Carolyn Magee, PharmD, BCCCP  
|                   | Joe Mazur, PharmD, BCPS, BCNSP  
|                   | Ron Neyens, PharmD  
|                   | Barbara Wiggins, PharmD, CLS, BCPS, BCCCP, FNLA, FAHA, FCCP, FACC  

| Elective          | Holly Meadows, PharmD, BCPS  
|-------------------|-----------------------------|
|                   | Neha Patel, PharmD, BCPS    

**Solid Organ Transplant**  

| Elective          | Sophie Robert, BPharm, PharmD, BCPP  
|-------------------|-------------------------------------|
|                   | Clint Ross, PharmD, BCPP            

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*Required. **Additional elective rotations may be available after appropriate development and review of the learning experience description.
**Resident Responsibilities**

- Reviewing and fulfilling the requirements set forth in the residency manual
- Providing competent patient care and other performing other rotation-based activities
- Coordinating medicine journal club and team teaching
- Participating in designated committee activities
- Ensuring all evaluations are completed in a timely fashion
- Soliciting and incorporating feedback from preceptors
- Discussing any desired changes to the program, preceptor-requested projects, or newly identified deficiencies with the RPD (and advisor, if appropriate) as they arise
- Actively participating in medicine group activities and any designated projects

**Individual Learning Experience Evaluations and Grading**

The resident is expected to make substantial progress or achieve all of the required outcomes according to ASHP Educational Outcomes, Goals and Objectives for PGY2 Pharmacy Residencies in Internal Medicine. Elective outcomes, goals, and objectives will be assigned based on the incoming resident’s experience and interests.

The resident will be oriented to each learning experience at the beginning of the experience. At that time, the resident and preceptor should discuss the preceptor’s expectations, the resident’s overarching goals for the year (development plan) and goals for the individual month, and the goals and objectives assigned for evaluation upon completion of the experience. The resident should provide and expect/solicit feedback throughout the experience. The resident should actively self-evaluate throughout the month and share those reflections with the preceptor at the midpoint and final evaluations at a minimum. The resident’s formal self, preceptor, and experience evaluations are due upon completion of the learning experience. The preceptor will complete a midpoint and final evaluation of the resident’s progress. Goals are assigned for evaluation in a particular learning experience based on whether the rotation is a required rotation or elective and the timing of the experience in the year. Generally, goals are assigned in the order in which it is anticipated they may be accomplished or achieved. The resident’s progress will be discussed with the RPD both informally throughout the year and formally at quarterly assessments. The resident is expected to upload any relevant documentation that occurs outside of Pharmacademic to their shared Box Folder.

Please refer to the residency manual for further details regarding the PGY2 Internal Medicine program.
## Successful Completion of the Program

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All PGY2 residents have their PGY1 residency certificate on file.</td>
</tr>
<tr>
<td></td>
<td>As is applicable to the specific residency program, residents will complete the ACLS/PALS curriculum and participate in medical emergencies.</td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
</tr>
<tr>
<td></td>
<td>No NI’s may be present upon graduation of the program.</td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations</td>
</tr>
<tr>
<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>If assigned, will participate in medication use evaluation(s). Provide a written document with methods, findings, and recommendations.</td>
</tr>
<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>For PGY2 programs, complete disease-specific appendix</td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
</tr>
<tr>
<td></td>
<td>Complete all Pharmacy On-call Service requirements as assigned.</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements as assigned. PGY2s are required to work 16 hours per month.</td>
</tr>
<tr>
<td></td>
<td>Present the project at an approved local, national, regional or state meeting.</td>
</tr>
<tr>
<td></td>
<td>Evaluate 4 Grand Rounds presentations throughout the year</td>
</tr>
</tbody>
</table>

## Program Candidate Selection

Qualified applicants must have completed a PGY1 residency or receive documentation of equivalent experience through ASHP. Applications will be accepted through PhorCas. Applicants will be evaluated based on communication skills, previous experiences and professional activities, and required application materials such as letter of intent and letters of recommendation. Approximately 3 to 6 candidates will be interviewed per available position.

Internal candidates may apply for early commitment. If early commitment is appropriate, the candidate will be notified prior to attending MCM, but the applicant will not be asked to commit until after the meeting. Internal candidates may also be referred to the regular match process at the discretion of the RPD or based upon early commitment interview results.
Appendix P

Medical University of South Carolina – MUSC Health
PGY2 Oncology Residency Program

Introduction

The Medical University of South Carolina (MUSC) Health is a tertiary care teaching hospital that serves the colleges of medicine, dentistry, nursing, allied health, and pharmacy. Included in the patient population served by MUSC are hematology/oncology patients from the greater Charleston area, the surrounding low country of South Carolina, and out of state referrals. MUSC serves these patients through a dedicated inpatient floor in the Ashley River Tower Hospital, the MUSC Children’s Hospital, and through several outpatient oncology clinics and infusion areas including the NCI-designated Hollings Cancer Center, North Charleston, and East Cooper clinics. For this residency program, the resident will participate in care of this broad patient population focusing on inpatient and ambulatory management.

Program Purpose

PGY2 pharmacy residency programs build on Doctor of Pharmacy (Pharm.D.) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if available.

Intended Outcomes

Specific residency goals and objectives will be established in the beginning of the residency year and modified according to the resident’s interests, previous experiences, and advisor input. To meet the purpose of the residency, the resident will advance to achieve the following outcomes:

- Serve as an authoritative resource on the optimal use of medications used to treat individuals with cancer.
- Optimize the outcomes of the care of individuals with cancer by providing evidence-based, patient-centered medication therapy as an integral part of an interdisciplinary team.
- Manage and improve the medication-use process in oncology patient care areas.
- Demonstrate excellence in the provision of training or educational activities for health care professionals and health care professionals in training.
- Sustain the ongoing development of expertise and professionalism in the practice of oncology pharmacy.
- Conduct oncology pharmacy practice research and create documents worthy of presentation or publication on cancer-related topics.
- Function effectively in oncology settings participating in clinical investigations.

Residency Program Structure

The PGY-2 Oncology Pharmacy Residency at MUSC is a one-year post-graduate training program designed to develop essential knowledge and skills for contemporary health-system pharmacy practice at a major academic medical center or community-based hospital, or position in academia. The residency program provides the flexibility to adapt to the resident’s specific learning needs and goals. The training is provided through concentrated clinical rotational and longitudinal experiences.
**Residency Rotations**

There are 10 required learning experiences, ranging in 2 weeks duration to longitudinal:

<table>
<thead>
<tr>
<th>Learning Experiences</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation/Investigational Drug Services</td>
<td>1 month</td>
</tr>
<tr>
<td>Inpatient Malignant Hematology</td>
<td>1 month</td>
</tr>
<tr>
<td>Outpatient Malignant Hematology</td>
<td>1 month</td>
</tr>
<tr>
<td>Outpatient BMT</td>
<td>1 month</td>
</tr>
<tr>
<td>Solid Tumors</td>
<td>4 months</td>
</tr>
<tr>
<td>Research/Academia</td>
<td>1 month</td>
</tr>
<tr>
<td>Palliative Care</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Clinical Operations On-call</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Oncology Practice Management</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Oncology Staffing</td>
<td>Longitudinal</td>
</tr>
</tbody>
</table>

The program is flexible in its design to offer the following elective rotations:

<table>
<thead>
<tr>
<th>Elective Learning Experiences*</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimicrobial Stewardship</td>
<td>1 month</td>
</tr>
<tr>
<td>Critical Care</td>
<td>1 month</td>
</tr>
<tr>
<td>Drug Information</td>
<td>1 month</td>
</tr>
<tr>
<td>Inpatient BMT</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Inpatient Oncology</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Investigational Drug Services</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatric Oncology</td>
<td>1 month</td>
</tr>
<tr>
<td>Academician Preparation Program (APP)**</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Pharmacy Research Certificate</td>
<td>Longitudinal</td>
</tr>
</tbody>
</table>

*The resident may repeat or customize any prior experience to achieve their residency goals and needs.

**The APP is available to residents who have not completed a similar program during their PGY-1 residency.

*Additional preceptors that the resident will work with during staffing, orientation, clinical on-call and during elective rotations not listed.
Residency Preceptors (Expectations by the RPD)

Each clinical preceptor will be responsible for the coordination of his/her own learning experience and any necessary modifications, with the assistance of the RPD, to achieve the resident’s goals. The residency preceptor will exhibit the characteristics and aptitude necessary for residency training including the mastery of the four preceptor roles fulfilled when teaching clinical problem solving (direct instruction, modeling, coaching and facilitation). The residency preceptor will guide and monitor the resident’s activity and service throughout the learning experience. The residency preceptor will provide ongoing formative and summative evaluations of the resident’s performance, with the goal of advancing the resident’s competency on the specific goals assigned to the experience.

The specific responsibilities are to:

- Understand the resident’s responsibilities to the learning experience and to facilitate ongoing activities such as projects, in-services, student discussions, and manuscript preparation.
- Develop and maintain goals and objectives for the specific learning experience(s).
- Review the resident’s customized training plan and resident’s previous performance and modify the learning experience accordingly.
- Orient the resident to the rotation’s setting and monitor/evaluate/critique the resident’s performance during the experience.
- Provide the resident a midpoint in written and verbal format and be able to complete the final summative PharmAcademic evaluation by month’s end as outlined in the residency manual.
- Advise the RPD of any appropriate interventions that may be needed relevant to the resident’s performance.
- Actively participate in regular feedback sessions in which preceptors and the RPD consider overall program changes based on evaluations, observations, and direct resident feedback and surveys.

Residency Advisor Role

Each resident is assigned an advisor at the beginning of the PGY2 year. Advisors are appointed by the RPD. The residency advisor will be responsible for the supervision, guidance, and on-going evaluation of the resident’s progress throughout the residency, as well as serve in an informal professional mentoring role.

Specific responsibilities include:

- Contacting resident prior to the start of the PGY2 year to offer guidance on rotation selection/scheduling questions and to ensure the resident is working on licensure (if out of state) and a place to live
- Meet with the resident during the orientation month to help the resident in the design of his/her customized plan, selecting a residency research project, modifying rotation schedule as necessary, etc.
- Review all evaluations and participate in the resident’s quarterly evaluation.
- Assist RPD with customizing the resident’s training plan as necessary based on the resident’s progress.
- Insure resident is setting and meeting all project deadlines.
- Serve as a mentor to the resident by assisting with career exploration and applying and interviewing for jobs.

Specific Resident Responsibilities

The residents’ role is that of a student, novice practitioner, and emerging clinician and/or administrator and educator. The resident is to participate in ongoing clinical and administrative services with the assistance of the residency preceptor and develop their skill set into a competent clinical practitioner and/or future administrator. The resident must accept and apply constructive criticism in addition to performing self-evaluations on their performance.
In order to promote an effective and productive residency experience, the relationship between a resident and rotation preceptor must be highly communicative, and a meaningful dialogue must be achieved. Specifically, the resident will:

- Sign off on the learning experience orientation form on the first day of each new clinical rotation.
- Maintain strict deadlines for PharmAcademic evaluation and assessment requirements as outlined in the MUSC residency manual. This involves project work, MUE work, seminar preparation, and any other educational or in-service/presentation that will require preceptor feedback.
- Understand the preceptor’s expectations for daily activities, services provided and preceptor contact.
- Participate in pharmacy functions (e.g. rounds, patient care conferences, lectures, departmental meetings, clinical staff meetings, journal clubs, seminars, and RITEs) in accordance to the MUSC residency manual.
- As outlined by the clinical preceptor, provide a detailed account of activities as they relate to the goals and objectives of the learning experience.
- Maintain active communication with the preceptor, advisor and/or RPD concerning any planned off-service activities (eg. meetings, seminars, projects, staffing, on-call commitments) that the resident will be participating in during the rotation.

**Individual Learning Experience Evaluations and Grading**

Each residency experience is thoughtfully designed to provide the resident with the tools needed to successfully complete and achieve all* of the required competency areas, goals and objectives for PGY2 Pharmacy Residencies in Oncology. This will include the following under the “achieved category”:

- Competency Area R1: Patient Care
- Competency Area R2: Advancing Practice and Improving Patient Care
- Competency Area R3: Leadership and Management
- Competency Area R4: Teaching, Education, and Dissemination of Knowledge
- Competency Area R5: Oncology Investigational Drugs

A. *The resident is expected to demonstrate proficiency in 95% or above of all activities linked to these specific outcomes via the various goals and objectives assigned from the learning experiences to successfully complete the MUSC program. The resident will first observe, learn, act, and then master a particular activity, which will deem them having achieved that goal. This again will be highly individualized and not applied to every resident in exactly the same manner.

B. For the various elective competency areas, goals and objectives for PGY2 Pharmacy Residencies in Oncology, the resident may or may not have elective goals and objectives assigned based upon their individual customized residency plan. If a competency area is assigned, it must be satisfactorily completed (at least 95% proficient) to achieve a residency certificate from the MUSC program. The following are elective outcomes which may be selected:

- Competency Area E1: Teaching and Learning
- Competency Area E2: Initiating an Oncology Pharmacy-Related Service
- Competency Area E3: Oncology Credentialing
- Competency Area E4: Publishing
- Competency Area E5: Management of Oncology Medical Emergencies
- Competency Area E6: Specialty Pharmacy
All PGY2 residents have their PGY1 residency certificate on file.

Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June).
No NI’s may be present upon graduation of the program.

Complete all assigned evaluations

Complete end-of-year self-assessment

Participate in a medication use evaluation(s). Provide a written document with methods, findings, and recommendations.

Complete a service or research project designed to improve the services of the Pharmacy ICCE.

Present the project at an approved local, national, regional or state meeting.

Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal.
Editorial assistance by the preceptor is required.

Complete the ASHP oncology residency disease-specific appendix

Prepare and present an ACPE-approved continuing education seminar.

Prepare and present a lecture for pharmacy students.

Prepare a drug monograph OR update/create a guideline/protocol

Evaluate 4 Grand Rounds presentations throughout the year

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**Selection of Residency Candidates**

The PGY2 Oncology Residency is seeking candidates who have broad rotational and work experience, have experience giving presentations, conducting and presenting research, are active in professional organizations, have demonstrated effective communication skills, have a track record of successfully balancing responsibilities and completing assignments, and have a strong scholarly foundation to build upon. Residency candidates are selected for interviews in accordance with the program’s candidate selection procedures and evaluated for ranking after interview by the scoring rubric.

**Contact information**

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Residency Program Director – PGY-2 Oncology Pharmacy Specialty Residency
Adjunct Assistant Professor, College of Pharmacy

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ABOUT MUSC HEALTH

As the clinical health system of the Medical University of South Carolina (MUSC), MUSC Health is dedicated to delivering the highest quality patient care available, while training generations of competent, compassionate health care providers to serve the people of South Carolina and beyond. Comprising some 1,600 beds, more than 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and nearly 275 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster, and Marion counties. In 2018, for the fourth consecutive year, U.S. News & World Report names MUSC Health the number one hospital in South Carolina. To learn more about clinical patient services, visit muschealth.org.

Founded in 1824, MUSC and its affiliates have a collective annual budget of $3 billion. The more than 17,000 MUSC team members include world-class faculty, physicians, specialty providers, and scientists who deliver groundbreaking education, research, technology, and patient care. MUSC is comprised of the Colleges of Pharmacy, Medicine, Nursing, Dentistry, Health Professions, and Graduate Studies. For information on academic programs, visit musc.edu.

MUSC Children's Health is an integrated health care delivery system that provides comprehensive care for children from before birth to 18 years of age, even older in selected patient populations. We believe children have special needs for everything from medicines and the size of their beds to special care that only specially trained pediatric professionals can provide. U.S. News & World Report honored five of our pediatric services in the 2019-2020 issue of Best Children's Hospitals. The new, state-of-the-art, approximately 250-bed MUSC Shawn Jenkins Children’s Hospital and the Pearl Tourville Women’s Pavilion were designed to improve the experience for our patients, their families, and the health care team.

ABOUT MUSC HEALTH PHARMACY SERVICES

The MUSC Health Pharmacy Services Integrated Center of Clinical Excellence (ICCE) provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies that fulfill the mission, vision, and goals of providing excellent pharmaceutical care to all patients. Pharmacy Services employs almost 300 pharmacists, technicians, and support staff, including over 30 residents participating in 16 different programs.

Pediatric pharmacy services in our MUSC Shawn Jenkins Children’s Hospital are provided 24 hours per day, 7 days per week. Our clinical pharmacists and pharmacy specialists round with the medical/surgical teams covering the pediatric, neonatal, and pediatric cardiothoracic intensive care units, general pediatrics, pediatric surgery, pediatric hematology/oncology. Access to clinical pharmacy services is available 24 hour per day, 7 days per week through the Pediatric Clinical Pharmacy On-call Service which is staffed by pharmacy residents and clinical pharmacy specialists. Pediatric ambulatory clinics are housed in the R. Keith Summey Medical Pavilion, the Shawn Jenkins Children’s Hospital, or various outreach clinics.
ABOUT THE PGY2 PEDIATRIC PHARMACY RESIDENCY

GENERAL INFORMATION

The MUSC PGY2 Pediatrics Pharmacy residency has trained pediatric pharmacists for more than 30 years with more than 60 residents having successfully completed the program and obtained successful employment afterward.

PROGRAM PURPOSE

The PGY-2 Pediatric Pharmacy Residency is a one-year program designed to build upon the resident's Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency program to contribute to the development of a clinical pharmacist specialized in the care of children in a variety of pediatric practice environments. The PGY2 Pediatric Pharmacy residency provides the resident with opportunities to function independently as a practitioner by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice functions. Residents also will continue to develop skills in patient- and family-centered care and pharmacy operational services.

The residency program is designed to develop accountability; practice patterns, habits, and expert knowledge, skills, attitudes, and abilities in the area of pediatric pharmacy practice. The residency program builds on the broad-based competencies achieved in a PGY1 residency, transitioning the resident from generalist care to providing specialized care to children. It will equip the resident to participate as an integral member of an interdisciplinary team caring for children, assuming responsibility for the care of these patients. The residency provides opportunities to function independently as a practitioner by conceptualizing and integrating accumulated experience and knowledge and transforming both into improved drug therapy outcomes for children. The residency provides opportunities for teaching, research, and leadership. A resident who successfully completes this residency will possess competencies that enable success as a clinical pharmacist in any chosen area of clinical practice, success as a clinical faculty member with responsibilities for patient care and precepting pharmacy students and residents, and attainment of board certification in Pediatrics (BCPPS).

INTENDED OUTCOMES

The resident is expected to achieve all the goals specified by the American Society of Health-system Pharmacists (ASHP) Accreditation Standards for PGY2 Pediatric Pharmacy residents. Resident-specific goals and objectives will be established and modified according to the resident's interests and previous experiences. The resident will be expected to advance to meet the following outcomes:

- Serve as an authoritative resource on the optimal use of drugs in children;
- Contribute to the development and monitoring of nutrition care plans for children;
- Optimize the outcomes of the care of children by providing evidence-based, patient-centered drug therapy as an integral part of an interdisciplinary team in a variety of practice areas;
- Manage and improve the medication-use process for children;
- Exercise leadership and practice management skills;
Demonstrate excellence in the provision of medication- and practice-related education and training;

Conduct and publish pediatric pharmacy-related practice research;

Use medical informatics efficiently;

- Promote health improvement, wellness, and disease prevention; and
- Sustain ongoing personal professional development.

Residency Program Director (until June 30, 2019)
Katherine H. Chessman, PharmD, FCCP, FPPAG, BCPS, BCNSP
Professor and Interim Chair, Clinical Pharmacy and Outcomes Sciences
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Clinical Pharmacy Specialist, Pediatrics/Pediatric Surgery
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Residency Program Director (beginning July 1, 2020)
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Heather G. Easterling, PharmD, MBA
Administrator of Pharmacy Services, MUSC Medical Center
Director, Health System Pharmacy Administration Residency
Clinical Associate Dean for Medical Center Affairs
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Preceptors

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Toby Cox, PharmD, BCPS; Clinical Pharmacy Specialist, Pediatrics/Neonatology; Affiliate Assistant Professor, Clinical Pharmacy and Outcomes Sciences

Sandra Garner, PharmD, FCCP, BCPS, BCPPS; Clinical Pharmacy Specialist, Pediatrics/Neonatology; Professor, Clinical Pharmacy and Outcomes Sciences

Lauren Haney, PharmD; BCPS, BCPPS, Clinical Pharmacy Specialist, Pediatrics/Cardiothoracic Surgery/Cardiology; Affiliate Assistant Professor; Clinical Pharmacy and Outcomes Sciences

Julie Heh, PharmD; BCPS, BCPPS, Clinical Pharmacy Specialist, Pediatrics/Hematology/ Oncology; Affiliate Assistant Professor, Clinical Pharmacy and Outcomes Sciences

Katie Malloy, PharmD, BCPPS; Clinical Pharmacy Specialist, Pediatrics/Neonatology

Colleen Scherer, PharmD, BCPS, MPA; Coordinator, Children’s Hospital Pharmacy

Kathy Sprott, PharmD, BCPS; BCPPS, Clinical Pharmacy Specialist, Pediatrics/Transplant; Affiliate Assistant Professor, Clinical Pharmacy and Outcomes Sciences

Jill Thompson, PharmD, BCPPS; Pediatric Clinical Pharmacy Coordinator; Clinical Pharmacy Specialist, Pediatric ICU/Surgery; Affiliate Associate Professor, Clinical Pharmacy and Outcomes Sciences

PROGRAM STRUCTURE

The resident will have the opportunity to participate in the care of inpatient and ambulatory patients through monthly clinical rotations, longitudinal clinics, and other activities. There are eight core (required) learning experiences. Electives (2-3 months) will be targeted to the resident’s interests, are flexible, and are available in a wide variety of areas.

REQUIRED PATIENT CARE LEARNING EXPERIENCES

<table>
<thead>
<tr>
<th>Learning Experience</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation (if non-MUSC PGY1)</td>
<td>1 month (July)</td>
</tr>
<tr>
<td>General Pediatrics</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatric Intensive Care</td>
<td>2 months</td>
</tr>
<tr>
<td>Neonatal Intensive Care</td>
<td>2 months</td>
</tr>
<tr>
<td>Pediatric Cardiothoracic Intensive Care</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatric Hematology/Oncology</td>
<td>1 month</td>
</tr>
<tr>
<td>Clinical Teaching</td>
<td>1 month</td>
</tr>
<tr>
<td>Electives (various)</td>
<td>2 months</td>
</tr>
<tr>
<td>Ambulatory Care Clinic (Cystic Fibrosis, Solid Organ Transplant, Oncology)</td>
<td>Longitudinal, one half-day per week</td>
</tr>
</tbody>
</table>

LONGITUDINAL EXPERIENCES

Clinical Staffing
Residents will gain clinical experience providing service throughout the year as a clinical pharmacist in the Children’s Hospital Pharmacy. PGY2 Pediatric Pharmacy residents will staff 16 hours per month. Residents will be scheduled in a variety of roles. Activities will include, but are not limited to, medication reconciliation, order verification including parenteral nutrition verification, sterile product verification, attending emergency codes, delivering patient education, and answering drug information questions. Residents will be evaluated quarterly on this learning experience.

Pediatric Clinical On-Call Service
Residents will participate in the Pediatric Clinical Pharmacy On-Call Service which provides 24-hour clinical pharmacy services. Residents will serve as the primary on-call provider with a clinical pharmacy specialist as back-up preceptor approximately one week per month. All clinical recommendations are reviewed with the back-up. On-call responsibilities include, but are not limited to, monitoring of patients receiving anticoagulants, aminoglycosides, vancomycin, and other high-risk medications; ordering parenteral nutrition; answering drug information questions; and monitoring complex patients. The resident will be evaluated on this learning experience at least three times each year.

Research Project
Each resident will complete a major service or research project during the year. Project ideas will be generated by care team members of MUSC Health to address clinical and operational needs for Pharmacy Services and patients of the MUSC Children’s Hospital. The resident will present the results of their project at a local, state, regional, or national meeting, and they must write a manuscript suitable for publication describing the results of the project. Residents will be provided one working day each month to work on the project. The resident’s progress will be evaluated on this learning experience quarterly.

TEACHING REQUIREMENTS
To ensure advancement of education and training skills, the resident will be required to:

• provide at least one lecture to Doctor of Pharmacy students and one ACPE-accredited seminar;

• co-precept PharmD students on pediatric rotations;

• lead case and topic discussions and journal clubs;

• evaluate Doctor of Pharmacy student Grand Rounds presentations; and

• provide in-service education.
OPTIONAL CERTIFICATE PROGRAMS

Academic Preparation Program (APP)

The MUSC College of Pharmacy offers an optional certificate to residents who are interested in enhancing skills needed in an academic environment. Residents are assigned a faculty mentor for this program. Requirements for APP include providing two hours of didactic lectures, developing a complex patient case, facilitating five small group discussions and/or laboratory exercises, and serving as a co-preceptor for two students on APPE rotations.

Research Certificate Program

The MUSC College of Pharmacy also offers a research certificate program for residents, consisting of live sessions aimed at improving the resident’s ability to conduct, disseminate, and interpret research.
EVALUATION METHOD

Residents and preceptors will use PharmAcademic to complete evaluations throughout the year for all learning experiences. The resident is expected to successfully complete and achieve all of the required outcomes and 80% of the elective outcomes assigned according to the ASHP Educational Outcomes, Goals, and Objectives for PGY2 Pharmacy Practice residents (available at https://www.ashp.org/Professional-Development/Residency-Information/Residency-Program-Directors) as assessed by the Residency Program Director at the last quarterly evaluation.

Specifics regarding residency and preceptor evaluation responsibilities and expectations can be found in the Residency Manual.

For each learning experience, the resident will complete a summative self-evaluation of applicable goals and objectives, an evaluation of the learning experience, and an evaluation of the preceptor. The preceptor completes an initial learning experience introduction, a midpoint evaluation, and a final evaluation that details the resident’s performance related to the identified learning objects that correlate with the learning experience as well as any additional areas of pharmacy practice.

BENEFITS

Resident Stipend: assessed annually and communicated in the employment letter

Leave: 15 days of paid leave for sick leave, vacation time, holidays, and interview days. Administrative time is granted for attendance at professional meetings or other duties, if approved by the RPD. Long-term leave (maximum, 8 weeks) is available through a combination of paid leave and/or leave without pay.

Health Insurance: Medical and dental insurance is available through MUSC Health.

Parking: Parking at MUSC Health is available for a monthly charge.

Technology: Residents will be provided a laptop and a pager to use throughout the year.

Travel: Each resident is given a stipend to assist in travel expenses for professional meetings as approved by the RPD and the Director of Graduate Pharmacy Education.
### Appendix A: Required Activities to Earn a Residency Certificate

<table>
<thead>
<tr>
<th>Date Achieved (if applicable)</th>
<th>Required Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pharmacy licensure in South Carolina by July 1; if unable to be licensed by September 30, the resident will be dismissed.</td>
</tr>
<tr>
<td></td>
<td>Complete BLS, ACLS, and PALS. (May be accomplished in PGY1 year with certificate that expires after June 30 of residency year.)</td>
</tr>
<tr>
<td></td>
<td>Complete all required rotation experiences to the satisfaction of the rotation preceptor and RPD.</td>
</tr>
<tr>
<td></td>
<td>Complete all assignments in PharmAcademic.</td>
</tr>
<tr>
<td></td>
<td>Complete initial and quarterly updates to the development plan. Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Attain ‘Achieved’ on 100% of the ASHP goals and objectives for the PGY2 Pediatric Pharmacy residency</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements achieving “Achieved” on all goals and objectives in the learning experience.</td>
</tr>
<tr>
<td></td>
<td>Participate in the Pediatric Clinical Pharmacy On-call Service and achieve “Achieved” all goals and objectives in the learning experience.</td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar and receive positive evaluations.</td>
</tr>
<tr>
<td></td>
<td>Complete a research project designed to improve the services of the Pharmacy ICCE, specifically in the MUSC Children’s Hospital. Present the findings as a poster and write a manuscript suitable for publication.</td>
</tr>
<tr>
<td></td>
<td>Complete an MUE, if not completed in the PGY1 year.</td>
</tr>
</tbody>
</table>
Appendix B: Selection of Residency Candidates

While not required, the initial selection process generally begins at the ASHP Midyear Clinical Meeting in the Personnel Placement Service (PPS). The RPD will meet with potential candidates.

Resident candidates must complete an application via the PhORCAS online application system by midnight on December 31. The completed application includes:

1. Letter of intent (in PhORCAS)
2. Curriculum vitae (CV; in PhORCAS). The CV should include a list of rotations completed in the Doctor of Pharmacy program as well as those completed and planned in the PGY1 residency. The length of each rotation should be clear.
3. Three letters of reference completed by a health care professional who can attest to the applicant’s practice abilities and aptitudes (in PhORCAS). Reference letter writers should be instructed to complete the COMMENTS section for at least five of the characteristics rated in PhORCAS.
4. Official transcripts of all professional pharmacy education.

On-site interviews are required. Interviews are offered to qualified candidates after applications are reviewed by the pediatric clinical pharmacy group.

After all interviews are completed, the pediatric clinical pharmacy group will rank candidates for submission to the matching service.

A process by which MUSC PGY1 Pharmacy Practice residents may early commit to the PGY2 Pediatric Pharmacy residency is available in the Residency Manual.

Additional information is available at: muschealth.org/patients-visitors/about-us/residencies-and-fellowships/pharmacy.
Appendix R

Medical University of South Carolina – MUSC Health
PGY1/2 Pharmacotherapy Residency Program

As the clinical health system of the Medical University of South Carolina (MUSC), MUSC Health is dedicated to delivering the highest quality patient care available, while training generations of competent, compassionate health care providers to serve the people of South Carolina and beyond. Comprising some 1,600 beds, more than 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and nearly 275 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster, and Marion counties. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina. To learn more about clinical patient services, visit muschealth.org. Founded in 1824, MUSC and its affiliates have collective annual budgets of $3 billion. The more than 17,000 MUSC team members include world-class faculty, physicians, specialty providers and scientists who deliver groundbreaking education, research, technology and patient care. For more information on academic programs, visit musc.edu.

The MUSC Health Pharmacy Services Integrated Center of Clinical Excellence (ICCE) provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies to fulfill the mission, vision, and goals of providing excellent pharmaceutical care to all patients. Pharmacy Services employs almost 300 pharmacists, technicians, and support staff, including over 30 residents practicing in 16 programs. The MUSC PGY1 program was honored with the ASHP Pharmacy Residency Excellence Award in 2008.

General Information

Residents in PGY1 residency programs are provided the opportunity to accelerate their growth beyond entry-level professional competence in patient-centered care and in pharmacy operational services, and to further the development of leadership skills that can be applied in any position and in any practice setting. PGY1 residents acquire substantial knowledge required for skillful problem solving, strengthening their professional values and attitudes, and advancing the growth of their clinical judgment. The instructional emphasis is on the progressive development of clinical judgment, a process begun in the advanced pharmacy practice experiences of the professional school years but requiring further extensive practice, self-reflection, and shaping of decision-making skills fostered by feedback on performance. Specifically, residents will be held responsible and accountable for acquiring the following outcome competencies: managing and improving the medication-use process; providing evidence-based, patient-centered medication therapy management with interdisciplinary teams; exercising leadership and practice management; demonstrating project management skills; providing medication and practice-related education/training; and utilizing medical informatics. PGY2 pharmacy residency programs build on Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care of other advanced practice settings. Residents who successfully complete and accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized, along with board certification, if available.

Pharmacotherapy Program Purpose

The Pharmacotherapy Residency Program is designed to develop a specialized practitioner with an advanced degree of knowledge and skills in order to provide medication management to diverse patient populations with varied and complex medical problems. The resident will be able to function at a high level in a variety of practice areas.
By the conclusion of the residency, graduates will be prepared to establish a practice as a clinical specialist or as a college faculty member in a multitude of different areas. The resident will have developed the tools and skills required to provide excellent patient care, serve an active role in organization committees, present educational material to small and large groups, and participate in clinical research and publishing.

**Intended Outcomes**
Specific residency goals and objectives will be established in the beginning of the residency modified according to the resident’s interests and previous experiences and advisor input. To meet the purpose of the residency, the resident will advance to achieve the following outcomes:

- Proficiency in providing pharmaceutical care to patients in a variety of environments including, but not limited to; medical ICUs, surgical ICUs, general medicine, general pediatrics, and patients in the emergency room
- Participate as active members of an interdisciplinary team
- Provide education to healthcare professionals and patients
- Develop skills needed to create/modify protocols and guidelines; participate in cost-saving initiatives
- Attain board certification in practice area (ie: BCPS)

**Program Leadership**

**Residency Program Director**
Wendy M. Bullington, PharmD, BCPS
Clinical Specialist, Internal Medicine / Pulmonary
(843) 792-7351 (office)
bullingw@musc.edu

**Director of Graduate Pharmacy Education**
Heather G. Easterling, PharmD, MBA
Administrator of Pharmacy Services, MUSC Medical Center
Director, Health System Pharmacy Administration Residency
Clinical Associate Dean for Medical Center Affairs, MUSC College of Pharmacy
(843) 792-5691 (office)
easterling@musc.edu

**Advisors/Mentors**
Residents will be assigned an advisor responsible for the supervision, guidance, and on-going evaluation of the resident’s progress throughout the residency. Additionally, each resident will have multiple mentors for research projects, presentation development, and personal mentorship. The personal mentor exists to guide the resident throughout the year, answer questions, and help the resident navigate training and career opportunities following graduation.

**Program Structure**
The Pharmacotherapy Residency at the Medical University of South Carolina is a post PharmD program which provides 24 months of training in a contemporary pharmacy practice. The experience is intended to build knowledge and clinical skills across all areas of pharmacotherapy and provide both institutionally based and outpatient (ambulatory or primary care) practice. In addition, the pharmacotherapy residents will work with pediatric, adult, and geriatric patient populations. The resident will have various levels of involvement in clinical research, department of pharmacy service projects, and the education of others.
Required Rotations

<table>
<thead>
<tr>
<th>Learning Experience</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>1 month (July)</td>
</tr>
<tr>
<td>Clinical Generalist Rotation</td>
<td>1 month</td>
</tr>
<tr>
<td>Drug Information</td>
<td>1 month</td>
</tr>
<tr>
<td>Practice Management</td>
<td>1 month</td>
</tr>
<tr>
<td>Ambulatory Care Block*</td>
<td>2 month minimum</td>
</tr>
<tr>
<td>Pediatrics Block*</td>
<td>2 month minimum</td>
</tr>
<tr>
<td>Psychiatry Block*</td>
<td>2 month minimum</td>
</tr>
<tr>
<td>Acute Care / Internal Medicine Block*</td>
<td>4 month minimum</td>
</tr>
<tr>
<td>Critical Care Block*</td>
<td>4 month minimum</td>
</tr>
<tr>
<td>Electives</td>
<td>5 months, customized to resident</td>
</tr>
<tr>
<td>Longitudinal Clinic</td>
<td>½ day per week throughout residency</td>
</tr>
</tbody>
</table>

*Certain learning experiences are required but selective in that residents may select the specific learning experience under a more general topic.

Selective Learning Experience Options

<table>
<thead>
<tr>
<th>Acute Care</th>
<th>Ambulatory Care</th>
<th>Critical Care</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Transplant</td>
<td>Bone Marrow Transplant</td>
<td>Cardiovascular ICU</td>
<td>General Pediatrics (required if no prior pediatric experience)</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Pharmacotherapy</td>
<td>Medical ICU</td>
<td>Neonatal ICU</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Oncology</td>
<td>Medical-Surgical ICU</td>
<td>Pediatric ICU</td>
</tr>
<tr>
<td>Heart / Lung Transplant</td>
<td>Solid Organ Transplant</td>
<td>Neonatal ICU</td>
<td>Pediatric Cardiac ICU</td>
</tr>
<tr>
<td>Hematology / Oncology</td>
<td>Specialty Pharmacy</td>
<td>Neurosurgery ICU</td>
<td>Pediatric Hematology / Oncology</td>
</tr>
<tr>
<td></td>
<td>Left Ventricular Assist Device</td>
<td>Pediatric ICU</td>
<td>Pediatric Surgery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pediatric Cardiac ICU</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Surgery Trauma ICU</td>
</tr>
</tbody>
</table>

Electives: 5 months. May select any of the aforementioned rotations, plus the following:

- Antimicrobial Stewardship
- Emergency Medicine
- ID Consult
- Informatics
- Investigational Drug Services
- Medication Safety, Use & Policy
- Quality and Outcomes

Longitudinal Experiences

Ambulatory Clinic
Residents will gain clinical experience by participating in a longitudinal ambulatory care clinic one ½ day per week throughout the two years. The clinic will be chosen based on resident interest and preceptor availability.

Clinical Staffing Service
Residents will gain clinical experience providing service throughout the year as a clinical pharmacist. PGY1 residents

staff an average of 32 hours per month and PGY2 residents staff an average of 16 hours per month in one of the inpatient pharmacies (Ashley River Tower, Children’s Hospital, and University Hospital). Residents will be scheduled in a variety of central and decentralized roles so they gain experience providing a wide range of services. Activities include, but are not limited to, order verification, sterile product verification, completing pharmacokinetic monitoring, providing therapeutic consults, attending emergency codes, and delivering patient education.

On Call
Residents will participate in a Clinical Pharmacy on-call service for daytime, evening, weekend, and holiday coverage. Residents provide 24-hour availability of clinical pharmacy services and patient-specific drug therapy issues to all MUSC Health care team members. Clinical pharmacy specialists serve as a clinical back-up for the residents, and all therapeutic consults must be reviewed by the clinical back-up before recommendations are made by PGY1 residents. PGY1 residents have both adult and pediatric on call assignments throughout the year, and weekend on-call responsibilities count towards the 32 monthly service hours. PGY2 have adult call responsibilities, and may have pediatric call responsibilities depending on assigned rotations, which count towards the 16 monthly service hours.

Research Project
Each resident will complete a major service or research project during the residency year. Pharmacotherapy residents will complete one project during their PGY1 year and one project during their PGY2 year. Project ideas will be generated by care team members of MUSC Health to address clinical and operational needs for Pharmacy Services and patients at MUSC Health. The resident will present the results of their project at a local, state, regional, or national meeting, and they must write a manuscript suitable for publication describing the results of their project. Residents will be provided one working day each month during rotation hours to work on the project.

MUE
PGY1 pharmacotherapy residents will participate in small-group medication use evaluations during the fall to evaluate and implement measures to improve the quality of the medication-use process. Residents will complete an MUE in pairs under the oversight of a clinical and drug information liaison. PGY2 pharmacotherapy residents will independently participate in a medication use evaluation during their quality rotation. Residents may present their findings at the Vizient Pharmacy Network resident poster session in December as well as at relevant P&T and/or subcommittees at MUSC Health.

Seminar
Each resident will present at least one ACPE-accredited seminar during each year of the residency program. The goal of the seminar is to expand the resident’s communication skills, presentation techniques, and knowledge in a topic of their choosing.

Required Certificate Programs

Academician Preparation Program
The MUSC College of Pharmacy offers an optional certificate to residents in the Charleston area who are interested in enhancing skills needed in an academic environment. Residents are assigned a full-time faculty member as a mentor for this program. Additional requirements for APP include providing 2 hours of didactic lecture, developing one complex patient case, facilitating 5 small group discussions and/or laboratory exercises, and serving as the primary preceptor for 2 students on APPE rotations.

Research Certificate Program
The MUSC College of Pharmacy also offers a research certificate program for residents, consisting of live sessions aimed at improving residents’ ability to conduct, disseminate, and interpret research.
## Example Rotation Schedule

<table>
<thead>
<tr>
<th>PGY 1</th>
<th>Practice Area</th>
<th>Specific Rotation</th>
<th>Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>July</strong></td>
<td>Pharmacy Practice</td>
<td>Orientation</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>August</strong></td>
<td>Pharmacy Practice</td>
<td>Management</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>September</strong></td>
<td>Pharmacy Practice</td>
<td>Drug Information</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td>Pharmacy Practice</td>
<td>Clin Gen</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>November</strong></td>
<td>Pediatrics</td>
<td>General Pediatrics</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td>Pediatrics</td>
<td>Pediatric ICU</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>January</strong></td>
<td>Psychiatry</td>
<td>General Psychiatry</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>February</strong></td>
<td>Psychiatry</td>
<td>Geropsychiatry</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>March</strong></td>
<td>Acute Care</td>
<td>Internal Medicine</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>April</strong></td>
<td>Acute Care</td>
<td>Cardiology</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td>Acute Care</td>
<td>Transplant Nephrology</td>
<td>½ day per week (CHF)</td>
</tr>
<tr>
<td><strong>June</strong></td>
<td>Acute Care</td>
<td>Pulmonary</td>
<td>½ day per week (CHF)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PGY 2</th>
<th>Practice Area</th>
<th>Specific Rotation</th>
<th>Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>July</strong></td>
<td>Acute Care</td>
<td>Infectious Disease (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>August</strong></td>
<td>Acute Care</td>
<td>Hematology (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>September</strong></td>
<td>Acute Care</td>
<td>Internal Medicine (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td>Ambulatory Care</td>
<td>Transplant (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>November</strong></td>
<td>Ambulatory Care</td>
<td>Left Ventricular Assist Device (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td>Ambulatory Care</td>
<td>Pharmacotherapy Clinic (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>January</strong></td>
<td>Critical Care</td>
<td>STICU (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>February</strong></td>
<td>Critical Care</td>
<td>MICU (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>March</strong></td>
<td>Critical Care</td>
<td>MSICU (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>April</strong></td>
<td>Critical Care</td>
<td>Emergency Department (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td>Critical Care</td>
<td>Neurosurgery ICU (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
<tr>
<td><strong>June</strong></td>
<td>Pharmacy Practice</td>
<td>Outcomes (pharmacotherapy)</td>
<td>½ day per week (pharmacotherapy)</td>
</tr>
</tbody>
</table>

*Goal is to schedule rotation in blocks if possible*
Evaluation Method

Residents and preceptors will use PharmAcademic to complete evaluations throughout the year for all learning experiences. The resident is expected to successfully complete and **achieve 95%** of the required outcomes according to ASHP Educational Outcomes, Goals and Objectives for PGY1/2 Pharmacotherapy Residencies as assessed by the RPD at the last quarterly evaluation of PGY2 year. Specifics regarding residency evaluation responsibilities can be found in the Residency Manual.

For each learning experience, the resident completes a summative self-evaluation of applicable RLS goals and objectives, an evaluation of the learning experience, and an evaluation of the preceptor. The preceptor completes an initial learning experience introduction, a midpoint evaluation, and a final evaluation that details the resident’s performance related to the identified learning objectives that correlate with the learning experience as well as any additional areas of pharmacy practice. Preceptors should note

Benefits

- **Resident Stipend:** Assessed annually and communicated in the welcome letter.
- **Leave:**
  - PGY1 residents: 15 days of paid leave for sick time, vacation time, holidays, and interview days. Each PGY1 resident will also receive one paid time off day per month after orientation, with the exception of Clinical Generalist rotation (10 additional total days).
  - PGY2 residents: 23 days of paid leave for sick time, vacation time, holidays, and interview days.
  - Administrative time is granted upon approval for professional leave for meetings or other duties as determined.
  - Residents working on the designated holidays will not take paid leave.
  - Long term leave is available through a combination of paid leave and/or leave without pay, with a maximum of 8 weeks.
- **Health Insurance:** Medical and dental insurance is available through the MUSC Medical Center.
- **Parking:** Parking at MUSC Health is available for a monthly charge.
- **Technology:** Residents will be provided a laptop and a pager to use throughout the year.
- **Travel:** Each resident is given a stipend to assist in travel expenses for professional meetings as approved by the Director of Graduate Pharmacy Education.
### APPENDICES

#### Appendix A

<table>
<thead>
<tr>
<th>Acute Care</th>
<th>Ambulatory Care</th>
<th>Critical Care</th>
<th>Pediatrics</th>
<th>Management / DI</th>
<th>Clinical Generalist / Staffing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicole Bohm</td>
<td>Kristen Beeker</td>
<td>Jackie Hawn</td>
<td>Katherine Chessman</td>
<td>Carolyn Bondarenka</td>
<td>Helene Cote</td>
</tr>
<tr>
<td>Wendy Bullington</td>
<td>Jennifer Carter</td>
<td>Carolyn Magee</td>
<td>Toby Cox</td>
<td>Jeff Brittain</td>
<td>James Davis</td>
</tr>
<tr>
<td>Tracie Delay</td>
<td>Aubrey Drisaldi</td>
<td>Joe Mazur</td>
<td>Sandra Garner</td>
<td>Jason Cooper</td>
<td>Ashley Dean</td>
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<tr>
<td>Andy Maldonado</td>
<td>Kathy Edwards</td>
<td>Ron Neyens</td>
<td>Lauren Haney</td>
<td>Kelly Crowley</td>
<td>Sarah Harrison</td>
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<tr>
<td>Holly Meadows</td>
<td>Anshu Argula Gandhi</td>
<td>Melanie Smith</td>
<td>Julie Heh</td>
<td>Heather Easterling</td>
<td>Deanna Kidwell</td>
</tr>
<tr>
<td>Jean Nappi</td>
<td>Anastasia Graham</td>
<td>Barbara Wiggins</td>
<td>Kathy Sprot</td>
<td>Jeni Hayes</td>
<td>Holly Meadows</td>
</tr>
<tr>
<td>Neha Patel</td>
<td>Kacey Jackson</td>
<td>Jill Thompson</td>
<td>Matt Hebbard</td>
<td>Kathryn Noyes</td>
<td></td>
</tr>
<tr>
<td>Caroline Perez</td>
<td>Brittany Jones</td>
<td>Electives</td>
<td></td>
<td>Joel Melroy</td>
<td>Lauren Paré</td>
</tr>
<tr>
<td>Stephanie Kirk</td>
<td>Carol Brown</td>
<td>Psychiatry</td>
<td></td>
<td>Jason Mills</td>
<td>Lisa Rhyne</td>
</tr>
<tr>
<td>Julie Leal</td>
<td>Chara Calhoun</td>
<td>Amy Hebbard</td>
<td>Jimmy New</td>
<td>Jeffrey Sample</td>
<td></td>
</tr>
<tr>
<td>Jennifer MacDonald</td>
<td>Krutika Mediwalal</td>
<td>Daniel McGraw</td>
<td>Dixie Runey</td>
<td>Colleen Scherer</td>
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<tr>
<td>Pam Mazyck</td>
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<td>Shelby Stricklin</td>
<td>Samantha Swinhart</td>
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<td>Amy Sion</td>
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<td>Clint Ross</td>
<td>Chris Wisniewski</td>
<td>Victoria Tsurutis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kyle Weant</td>
<td></td>
<td></td>
<td></td>
<td>Stephanie White</td>
</tr>
</tbody>
</table>
# Appendix B
## Required Activities to Earn a Residency Certificate

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complete the ACLS curriculum.</td>
</tr>
<tr>
<td></td>
<td>Complete all of the required month-long rotation experiences to the satisfaction of the rotation preceptor and RPD: Acute Care, Ambulatory Care, Clinical Generalist, Critical Care, Drug Information, Management, Pediatrics, and Psychiatry.</td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations in PharmAcademic.</td>
</tr>
<tr>
<td></td>
<td>Complete initial and quarterly updates to the development plan. Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the RLS goals and objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements: PGY1 residents are required to work 32 hours per month and PGY2 residents are required to work 16 hours per month (including weekend on-call assignments).</td>
</tr>
<tr>
<td></td>
<td>Participate in the Pharmacy On-call Service for both Pediatric and Adult On-call.</td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar each year.</td>
</tr>
<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE each year. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal for each project.</td>
</tr>
<tr>
<td></td>
<td>Present the service or research project at an approved local, state, regional, or national meeting.</td>
</tr>
<tr>
<td></td>
<td>Participate in a medication use evaluation during each year. Consider presenting a poster of findings at the Vizient Pharmacy Network Resident Poster Session. Provide a written document with methods, findings, and recommendations.</td>
</tr>
<tr>
<td></td>
<td>Complete the Academician Preparation Program in its entirety.</td>
</tr>
<tr>
<td></td>
<td>Complete the Research Certificate Program in its entirety.</td>
</tr>
<tr>
<td></td>
<td>Complete a disease-specific appendix of all disease states encountered during the residency.</td>
</tr>
<tr>
<td></td>
<td>Residents may not have any NIs or be actively in failure to progress at the time of graduation.</td>
</tr>
</tbody>
</table>
Appendix C
Selection of Residency Candidates

Resident candidates must complete an application via the PhORCAS online application system by December 31 at midnight.

They must have a complete application which includes the following:

1. Letter of intent (uploaded with application)
2. Curriculum vitae (uploaded with application)
3. Three letters of reference completed by health professionals who can attest to the applicant’s practice abilities and aptitudes (uploaded directly from the authors beginning on November 19). At least one letter must be from an immediate supervisor and at least one letter must be from a clinical preceptor.
4. Official transcripts of all professional pharmacy education
5. Class rank in a sealed envelope from the Dean’s Office
6. List of Rotations completed as a separate addendum with description of activities including number of patients followed, activities, duties, projects, in-services, etc.
7. Complete the online submission form to provide a full list of rotations and accompany details for each rotation, located on the Application Information Page of the Pharmacy Residency Website: https://muschealth.org/patients-visitors/about-us/residencies-and-fellowships/pharmacy/application

All information is available at: https://muschealth.org/patients-visitors/about-us/residencies-and-fellowships/pharmacy

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Appendix S

Medical University of South Carolina – MUSC Health
PGY1 Pharmacy Practice Residency Program

As the clinical health system of the Medical University of South Carolina (MUSC), MUSC Health is dedicated to delivering the highest quality patient care available, while training generations of competent, compassionate health care providers to serve the people of South Carolina and beyond. Comprising some 1,600 beds, more than 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and nearly 275 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster, and Marion counties. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina. To learn more about clinical patient services, visit muschealth.org. Founded in 1824, MUSC and its affiliates have collective annual budgets of $3 billion. The more than 17,000 MUSC team members include world-class faculty, physicians, specialty providers and scientists who deliver groundbreaking education, research, technology and patient care. For more information on academic programs, visit musc.edu.

The MUSC Health Pharmacy Services Integrated Center of Clinical Excellence (ICCE) provides service to patients on a 24-hour basis through multiple inpatient and ambulatory pharmacies to fulfill the mission, vision, and goals of providing excellent pharmaceutical care to all patients. Pharmacy Services employs almost 300 pharmacists, technicians, and support staff, including over 30 residents practicing in 16 programs. The MUSC PGY1 program was honored with the ASHP Pharmacy Residency Excellence Award in 2008.

General Information

Residents in PGY1 residency programs are provided the opportunity to accelerate their growth beyond entry-level professional competence in patient-centered care and in pharmacy operational services, and to further the development of leadership skills that can be applied in any position and in any practice setting. PGY1 residents acquire substantial knowledge required for skillful problem solving, strengthening their professional values and attitudes, and advancing the growth of their clinical judgment. The instructional emphasis is on the progressive development of clinical judgment, a process begun in the advanced pharmacy practice experiences of the professional school years but requiring further extensive practice, self-reflection, and shaping of decision-making skills fostered by feedback on performance. Specifically, residents will be held responsible and accountable for acquiring the following outcome competencies: managing and improving the medication-use process; providing evidence-based, patient-centered medication therapy management with interdisciplinary teams; exercising leadership and practice management; demonstrating project management skills; providing medication and practice-related education/training; and utilizing medical informatics. Upon completion of the pharmacy practice residency, ASHP-accredited PGY2 residencies are available at MUSC in Ambulatory Care, Critical Care, Drug Information, Emergency Medicine, Internal Medicine, Oncology, Pediatrics, Psychiatry, and Solid Organ Transplant.

Program Purpose

The PGY1 pharmacy residency program builds on Doctor of Pharmacy (PharmD) education and outcomes to contribute to the development of clinical pharmacists responsible for medication-related care of patients with a wide range of conditions, eligible for board certification, and eligible postgraduate year two (PGY2) pharmacy residency training.

Intended Outcomes

Specific residency goals and objectives will be established in the beginning of the residency modified according to the resident’s interests and previous experiences and advisor input. To meet the purpose of the residency, the resident will advance to achieve the following outcomes:
• Manage and improve the medication-use process
• Provide evidence-based, patient-centered medication therapy management with interdisciplinary teams in a variety of environments
• Exercise leadership and practice management skills
• Demonstrate project management skills
• Provide medication and practice-related education/training
• Utilize medical informatics
• Conduct pharmacy practice research
• Exercise added leadership and practice management skills
• Provide drug information to health care professionals and/or the public
• Demonstrate additional competencies that contribute to working successfully in the health care environment

Program Leadership

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Administrator of Pharmacy Services, MUSC Medical Center
Director, Health System Pharmacy Administration Residency
Clinical Associate Dean for Medical Center Affairs, MUSC College of Pharmacy
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Advisors/Mentors
Residents will be assigned an advisor responsible for the supervision, guidance, and on-going evaluation of the resident’s progress throughout the residency. Additionally, each resident will have multiple mentors for research projects, presentation development, and personal mentorship. The personal mentor exists to guide the resident throughout the year, answer questions, and help the resident navigate training and career opportunities following graduation.

Program Structure
The PGY1 Pharmacy Practice Residency at MUSC is a one-year post-graduate training program designed to develop essential knowledge and skills for contemporary health-system pharmacy practice at a major academic medical center. The residency program provides the flexibility to adapt to the resident’s specific learning needs and goals. The training is provided through month-long clinical rotations and longitudinal experiences. Rotations will be blocked for November-December to ensure the resident has adequate exposure to the clinical services and patient populations in light of the major holidays and attendance at the ASHP Midyear Clinical Meeting.
### Required Rotations

<table>
<thead>
<tr>
<th>Learning Experience</th>
<th>Rotation Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>1 month (July)</td>
</tr>
<tr>
<td>Acute Care*</td>
<td>1 month</td>
</tr>
<tr>
<td>Ambulatory Care*</td>
<td>1 month</td>
</tr>
<tr>
<td>Clinical Generalist Rotation</td>
<td>1 month</td>
</tr>
<tr>
<td>Critical Care*</td>
<td>1 month</td>
</tr>
<tr>
<td>Drug Information</td>
<td>1 month</td>
</tr>
<tr>
<td>Management</td>
<td>1 month</td>
</tr>
<tr>
<td>Pediatrics*</td>
<td>1 month</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>1 month</td>
</tr>
<tr>
<td>Electives</td>
<td>2 months</td>
</tr>
</tbody>
</table>

*Certain learning experiences are required but selective in that residents may select the specific learning experience under a more general topic.

### Selective Learning Experience Options

<table>
<thead>
<tr>
<th>Acute Care</th>
<th>Ambulatory Care</th>
<th>Critical Care</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Transplant</td>
<td>Bone Marrow Transplant</td>
<td>Cardiovascular ICU</td>
<td>General Pediatrics (required if no peds experience)</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Family Medicine</td>
<td>Medical ICU</td>
<td>Neonatal ICU</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Internal Medicine</td>
<td>Medical-Surgical ICU</td>
<td>Pediatric ICU</td>
</tr>
<tr>
<td>Heart/Lung Transplant</td>
<td>Pharmacotherapy</td>
<td>Neonatal ICU</td>
<td>Pediatric Cardiac ICU</td>
</tr>
<tr>
<td>Hematology/Oncology</td>
<td>Oncology</td>
<td>Neurosurgery ICU</td>
<td>Pediatric Hematology/Oncology</td>
</tr>
<tr>
<td></td>
<td>Solid Organ Transplant</td>
<td>Pediatric ICU</td>
<td>Pediatric Surgery</td>
</tr>
<tr>
<td></td>
<td>Specialty Pharmacy</td>
<td>Pediatric Cardiac ICU</td>
<td>Surgery Trauma ICU</td>
</tr>
</tbody>
</table>

### Electives: 2 months. May select any of the aforementioned rotations, plus the following:
- Antimicrobial Stewardship
- Emergency Medicine
- ID Consult
- Informatics
- Investigational Drug Services
- Medication Safety, Use & Policy
- Transplant Quality and Outcomes

### Longitudinal Experiences

**Clinical Staffing Service**
Residents will gain clinical experience providing service throughout the year as a clinical pharmacist. PGY1 residents staff an average of 32 hours per month in one of the inpatient pharmacies (Ashley River Tower, Children’s Hospital, and University Hospital). Residents will be scheduled in a variety of central and decentralized roles so they gain experience providing a wide range of services. Activities include, but are not limited to, order verification, sterile product verification, completing pharmacokinetic monitoring, providing therapeutic consults, attending emergency codes, and delivering patient education.

**On Call**
Residents will participate in a Clinical Pharmacy on-call service for daytime, evening, weekend, and holiday coverage. Residents provide 24-hour availability of clinical pharmacy services and patient-specific drug therapy issues to all MUSC Health care team members. Clinical pharmacy specialists serve as a clinical back-up for the
Residents, and all therapeutic consults must be reviewed by the clinical back-up before recommendations are made by PGY1 residents. PGY1 residents have both adult and pediatric on call assignments throughout the year, and weekend on-call responsibilities count towards the 32 monthly service hours.

Research Project
Each resident will complete a major service or research project during the residency year. Project ideas will be generated by care team members of MUSC Health to address clinical and operational needs for Pharmacy Services and patients at MUSC Health. The resident will present the results of their project at a local, state, regional, or national meeting, and they must write a manuscript suitable for publication describing the results of their project. Residents will be provided one working day each month during rotation hours to work on the project.

MUE
PGY1 residents will participate in small-group medication use evaluations during the fall to evaluate and implement measures to improve the quality of the medication-use process. Residents will complete an MUE in pairs under the oversight of a clinical and drug information liaison, and they will present their findings at the Vizient Pharmacy Network resident poster session in December as well as at relevant P&T and/or subcommittees at MUSC Health.

Seminar
Each resident will present at least one ACPE-accredited seminar during the residency program. The goal of the seminar is to expand the resident’s communication skills, presentation techniques, and knowledge in a topic of their choosing.

Optional Certificate Programs
Academician Preparation Program
The MUSC College of Pharmacy offers an optional certificate to residents in the Charleston area who are interested in enhancing skills needed in an academic environment. Residents are assigned a full-time faculty member as a mentor for this program. Additional requirements for APP include providing 2 hours of didactic lecture, developing one complex patient case, facilitating 5 small group discussions and/or laboratory exercises, and serving as the primary preceptor for 2 students on APPE rotations.

Research Certificate Program
The MUSC College of Pharmacy also offers a research certificate program for residents, consisting of live sessions aimed at improving residents’ ability to conduct, disseminate, and interpret research.

Evaluation Method
Residents and preceptors will use PharmAcademic to complete evaluations throughout the year for all learning experiences. The resident is expected to successfully complete and achieve 95% of the required outcomes according to ASHP Educational Outcomes, Goals and Objectives for PGY1 Pharmacy Residencies as assessed by the RPD at the last quarterly evaluation. Specifics regarding residency evaluation responsibilities can be found in the Residency Manual.

For each learning experience, the resident completes a summative self-evaluation of applicable RLS goals and objectives, an evaluation of the learning experience, and an evaluation of the preceptor. The preceptor completes an initial learning experience introduction, a midpoint evaluation, and a final evaluation that details the resident’s performance related to the identified learning objectives that correlate with the learning experience as well as any additional areas of pharmacy practice. Preceptors should note
Benefits

- Resident Stipend: Assessed annually and communicated in the welcome letter.
- Leave: 15 days of paid leave for sick time, vacation time, holidays, and interview days. Each PGY1 resident will also receive one paid time off day per month after orientation, with the exception of Clinical Generalist rotation (10 total days). Administrative time is granted for attendance at professional meetings or other duties as determined. Long term leave is available through a combination of paid leave and/or leave without pay, with a maximum of 8 weeks.
- Health Insurance: Medical and dental insurance is available through the MUSC Medical Center.
- Parking: Parking at MUSC Health is available for a monthly charge.
- Technology: Residents will be provided a laptop and a pager to use throughout the year.
- Travel: Each resident is given a stipend to assist in travel expenses for professional meetings as approved by the Director of Graduate Pharmacy Education.

APPENDICES

Appendix A
Listing of PGY1 Preceptors (Current as of August 2019)

<table>
<thead>
<tr>
<th>Acute Care</th>
<th>Ambulatory Care</th>
<th>Critical Care</th>
<th>Pediatrics</th>
<th>Management / DI</th>
<th>Clinical Generalist / Staffing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicole Bohm</td>
<td>Kristen Beeker</td>
<td>Jackie Hawn</td>
<td>Katherine Chessman</td>
<td>Carolyn Bondarenka</td>
<td>Helene Cote</td>
</tr>
<tr>
<td>Wendy Bullington</td>
<td>Jennifer Carter</td>
<td>Carolyn Magee</td>
<td>Toby Cox</td>
<td>Jeff Brittain</td>
<td>James Davis</td>
</tr>
<tr>
<td>Tracie Delay</td>
<td>Aubrey Drisaldi</td>
<td>Joe Mazur</td>
<td>Sandra Garner</td>
<td>Jason Cooper</td>
<td>Ashley Dean</td>
</tr>
<tr>
<td>Andy Maldonado</td>
<td>Kathy Edwards</td>
<td>Ron Neyens</td>
<td>Lauren Haney</td>
<td>Kelly Crowley</td>
<td>Sarah Harrison</td>
</tr>
<tr>
<td>Holly Meadows</td>
<td>Anshu Argula Gandhi</td>
<td>Melanie Smith</td>
<td>Julie Heh</td>
<td>Heather Easterling</td>
<td>Deanna Kidwell</td>
</tr>
<tr>
<td>Jean Nappi</td>
<td>Anastasia Graham</td>
<td>Barbara Wiggins</td>
<td>Kathy Sprot</td>
<td>Jeni Hayes</td>
<td>Holly Meadows</td>
</tr>
<tr>
<td>Neha Patel</td>
<td>Kacey Jackson</td>
<td>Jill Thompson</td>
<td>Matt Hebbard</td>
<td>Kathryn Noyes</td>
<td>Holly Meadows</td>
</tr>
<tr>
<td>Caroline Perez</td>
<td>Brittany Jones</td>
<td>Electives</td>
<td>Joel Melroy</td>
<td>Lauren Paré</td>
<td></td>
</tr>
<tr>
<td>Stephanie Kirk</td>
<td>Carol Brown</td>
<td>Psychiatry</td>
<td>Jason Mills</td>
<td>Lisa Rhyne</td>
<td></td>
</tr>
<tr>
<td>Julie Leal</td>
<td>Chara Calhoun</td>
<td>Amy Hebbard</td>
<td>Jimmy New</td>
<td>Jeffrey Sample</td>
<td></td>
</tr>
<tr>
<td>Jennifer MacDonald</td>
<td>Krutika Mediwala</td>
<td>Daniel McGraw</td>
<td>Dixie Runey</td>
<td>Colleen Scherer</td>
<td></td>
</tr>
<tr>
<td>Pam Mazyck</td>
<td>Nicole Pilch</td>
<td>Sophie Robert</td>
<td>Shelby Stricklin</td>
<td>Samantha Swinhart</td>
<td></td>
</tr>
<tr>
<td>Amy Sion</td>
<td>Brian Raux</td>
<td>Clint Ross</td>
<td>Chris Wisniewski</td>
<td>Victoria Tsurutis</td>
<td></td>
</tr>
<tr>
<td>Kyle Weant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix B
### Required Activities to Earn a Residency Certificate

<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complete the ACLS curriculum.</td>
</tr>
<tr>
<td></td>
<td>Complete all of the required month-long rotation experiences to the satisfaction of the rotation preceptor and RPD: Acute Care, Ambulatory Care, Clinical Generalist, Critical Care, Drug Information, Management, Pediatrics, and Psychiatry.</td>
</tr>
<tr>
<td></td>
<td>Complete all assigned evaluations in PharmAcademic.</td>
</tr>
<tr>
<td></td>
<td>Complete initial and quarterly updates to the development plan. Complete end-of-year self-assessment and review with RPD.</td>
</tr>
<tr>
<td></td>
<td>Attain an “achieved” on 95% of the PGY1 RLS goals and objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
</tr>
<tr>
<td></td>
<td>Complete all staffing requirements: PGY1 resident programs are required to work 32 hours per month (including weekend on-call assignments).</td>
</tr>
<tr>
<td></td>
<td>Participate in the Pharmacy On-call Service for both Pediatric and Adult On-call.</td>
</tr>
<tr>
<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
</tr>
<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal.</td>
</tr>
<tr>
<td></td>
<td>Present the service or research project at an approved local, state, regional, or national meeting.</td>
</tr>
<tr>
<td></td>
<td>Participate in a medication use evaluation. Present a poster of findings at the Vizient Pharmacy Network Resident Poster Session. Provide a written document with methods, findings, and recommendations.</td>
</tr>
<tr>
<td></td>
<td>Residents may not have any NIs or be actively in failure to progress at the time of graduation.</td>
</tr>
</tbody>
</table>
Appendix C
Selection of Residency Candidates

Resident candidates must complete an application via the PhORCAS online application system by December 31 at midnight.

They must have a complete application which includes the following:

8. Letter of intent (uploaded with application)
9. Curriculum vitae (uploaded with application)
10. Three letters of reference completed by health professionals who can attest to the applicant’s practice abilities and aptitudes (uploaded directly from the authors beginning on November 19).
11. Official transcripts of all professional pharmacy education
12. List of Rotations completed as a separate addendum with description of activities including number of patients followed, activities, duties, projects, in-services, etc.
13. Complete the online submission form to provide a full list of rotations and accompany details for each rotation, located on the Application Information Page of the Pharmacy Residency Website: https://muschealth.org/patients-visitors/about-us/residencies-and-fellowships/pharmacy/application

All information is available at: https://muschealth.org/patients-visitors/about-us/residencies-and-fellowships/pharmacy

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Pager: 843-792-2123/12368
Appendix T

Medical University of South Carolina – MUSC Health
PGY2 Psychiatric Practice Residency Program

Program Description and Intended Outcomes

The PGY-2 Psychiatric Pharmacy Residency at MUSC is designed to develop essential knowledge and skills for contemporary health-system pharmacy practice at a major academic medical center, community-based hospital or other mental health facility (e.g. VA, state hospital, community mental health center). The training is provided through challenging concentrated clinical rotations and longitudinal experiences where residents acquire the knowledge necessary for treatment of mental health diagnoses, refine their clinical problem solving skills, strengthen their clinical judgement, and advance their teaching skills.

Specifically, this residency program is designed to develop psychiatry specialists who are qualified to excel in practice in a variety of mental health environments including, but not limited to: inpatient psychiatry (acute, general adult, dual diagnosis, geriatric, child/adolescent), emergency psychiatry, consult liaison psychiatry and various outpatient clinics. As part of the extensive training they will receive as residents, they will also be able to identify, prevent, and resolve medication-related problems, participate as active members of a multidisciplinary healthcare team, demonstrate leadership skills, and provide education to various healthcare professionals and trainees. The residency program provides the flexibility to adapt to the resident’s specific learning needs and career goals. Last, following completion of the program, residents will be well equipped to become board certified in psychiatric pharmacy.

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Phone: 843-792-5570
Email: rossca@musc.edu

Purpose Statement

PGY2 pharmacy residency programs build on Doctor of Pharmacy (Pharm.D.) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if available.
Residency Rotations and Structure
There are 8 required inpatient psychiatry learning experiences plus the mandatory orientation month for residents coming from PGY1 programs outside MUSC:

**General Adult Psychiatry – 2 months**
**Acute Psychiatry – 1 month**
**Geriatric Psychiatry – 1 month**
**Child/Adolescent Psychiatry – 1 month**
**Addictions – 1 month**
**Psychiatry Emergency Department – 1 month**
**Psychiatry Consult Liaison – 1 month**
**Orientation (July of each year if PGY1 at outside institution) – 1 month**

Additionally, there are required longitudinal outpatient psychiatry learning experiences which may include the PharmD Injection Clinic, Comprehensive Pain Management Program Clinic, ReVisions Day Treatment Program, and HIV-Psychiatry Clinic (including recovery clinic for substance use disorders). The program is flexible in its design to offer additional rotations in the above learning experiences depending on the resident’s interests and needs. Additionally, the above rotations can be designed as teaching rotations throughout the year for residents to co-precept P4 students on rotation.

Other required experiences include teaching, resident research project, medication use evaluation, and manuscript preparation/submission. Specific teaching requirements include lecture for PGY1 and PGY3 psychiatry residents (1 hour each), ACPE-accredited seminar (1 hour), and monthly topic discussions and small group facilitation for pharmacy trainees on psychiatry rotation. Additional opportunities for teaching are often available including through the MUSC College of Pharmacy. MUSC also offers optional teaching certificate (Academician Preparation Program) and research certificate programs.

Residency Preceptors (Expectations by the RPD)

Each clinical preceptor will be responsible for the coordination of their own learning experience, and be able to modify accordingly with the assistance of the RPD should the resident need remediation to accomplish residency goals. The residency preceptor will exhibit the characteristics and aptitude necessary for residency training including the mastery of the four preceptor roles fulfilled when teaching clinical problem solving (direct instruction, modeling, coaching and facilitation). The residency preceptor will guide and monitor the resident’s activity and service throughout the learning experience. The residency preceptor will provide ongoing formative and summative evaluations of the resident’s performance, with the goal of advancing the resident’s competency on the specific goals assigned to the experience.

The specific responsibilities are to:

- Understand the resident’s responsibilities to the residency teaching experience and to ongoing activities such as projects, topic discussions, clinic responsibilities, student discussions, and manuscript preparation.
- Develop and maintain goals and objectives for the specific residency teaching learning experience(s).
- Review the resident’s development plan and resident’s previous performance and modify the learning experience accordingly.
• Orient the resident to the rotation’s expectations, and monitor/evaluate/critique the resident’s performance during the experience.
• Provide the resident with both a verbal and written midpoint evaluation, and be able to complete the final summary PharmAcademic evaluation by month’s end as outlined in the residency manual.
• Advise the RPD of any appropriate interventions that may be needed relevant to the resident’s performance.
• Actively participate in an annual feedback session in which preceptors and the RPD consider overall program changes based on evaluations, observations, and direct resident feedback and surveys.

**Specific Resident Responsibilities**

The resident’s role is that of a novice practitioner and emerging clinician. The resident is to participate in ongoing clinical and administrative services with the assistance of the residency preceptor and develop their skill set into a competent clinical practitioner. The resident must accept and apply constructive criticism in addition to performing honest and thoughtful self-evaluations on their performance.

In order to promote an effective and productive residency experience, the relationship between a resident and rotation preceptor must be highly communicative, and a meaningful dialogue must be achieved. Specifically, the resident will:

• Sign off on the learning experience introduction on the first day of each new clinical rotation.
• Complete PharmAcademic evaluations in a timely manner – outlined in the current MUSC residency manual. This involves project work, MUE work, seminar preparation, and any other lecture or inservice/presentation that will require preceptor feedback. All evaluations should be completed by the last day of the learning experience, but no later than 72 hours after the completion of the learning experience.
• Understand the preceptor’s expectations for daily activities, services provided and preceptor contact.
• Maintain the disease-state appendix for review each quarter through discussion with the RPD.
• Participate in pharmacy functions (e.g. rounds, patient care conferences, lectures, departmental meetings, and seminars) in accordance to the MUSC residency manual.
• As outlined by the clinical preceptor, provide a detailed account of activities as they relate to the goals and objectives of the learning experience.
• Maintain active communication with the preceptor and RPD concerning any planned off-service activities (e.g. meetings, seminars, projects, staffing, on-call commitments) that the resident will be participating in during the rotation.

**Clinical Service Weekend/Pharmacy Operations Experience Responsibilities**

The PGY-2 Psychiatric Pharmacy resident will participate in the Psychiatric PharmD on-call program approximately one week per month, and will also be required to staff up to 24 hours per month in the IOP pharmacy. These experiences will augment not only their learning during the year, but also make them capable pharmacy practitioners upon graduation. The exact determination of what shifts they will work (4 hours in duration for the staffing component) will be disseminated during the orientation month of July each year. The resident will be evaluated by the operational coordinator for the area each quarter after gathering appropriate feedback from pharmacists working alongside the resident.
**Individual Learning Experience Evaluations and Grading**

The resident is expected to successfully complete and achieve all of the required outcomes according to ASHP Competency Areas, Goals and Objectives for PGY2 Psychiatric Pharmacy Residency.

The resident is required to demonstrate proficiency in 95% or above of all activities linked to these specific outcomes through the various goals and objectives assigned from the learning experiences to successfully complete the program. There can be no “needs improvements” on any goals or objectives for the residency year in order to successfully graduate from the program. The resident will first observe, learn, act, and then master a particular activity, which will deem them having achieved that objective. This again will be highly individualized for each resident.

**Selection of Residency Candidate**

Qualified applicants must have completed a PGY1 residency or receive documentation of equivalent experience through ASHP. The MUSC Heath Pharmacy Residency Program uses the PhORCAS Application System through ASHP. All application materials must be submitted through the applicant portal on ASHP’s website. The deadline for receipt of a complete application packet is December 31.

Completed applications include:

- Letter of intent (uploaded with application)
- Curriculum vitae (uploaded with application)
- Three references completed by healthcare professionals in PhORCAS who can attest to the applicant’s practice abilities and aptitudes, including their clinical problem solving, time management, and willingness to accept constructive criticism
  - At least one reference must be from a clinical preceptor
  - At least one reference must be from an immediate supervisor

The application, letter of intent, and curriculum vitae should be submitted via the PhORCAS applicant portal. References should be submitted via PhORCAS Reference Portal using the ASHP Reference Template directly from the authors no later than December 31.

Interviews will be offered to candidates based on the information submitted through PhORCAS. Approximately 3 to 6 candidates will be interviewed per available position. On site interviews will occur at the middle of January through end of February.

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<table>
<thead>
<tr>
<th>Date Achieved</th>
<th>Required Activities (to receive a residency certificate)</th>
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<tbody>
<tr>
<td></td>
<td>PGY1 residency certificate on file.</td>
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<tr>
<td></td>
<td>Attain an “achieved” on 95% of the RLS objectives as assessed by the RPD on the last quarterly evaluation (June).</td>
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<tr>
<td></td>
<td>No NI’s may be present upon graduation of the program.</td>
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<td></td>
<td>Complete all assigned evaluations</td>
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<td></td>
<td>Complete end-of-year self-assessment and review with RPD.</td>
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<tr>
<td></td>
<td>Participate in medication use evaluation. Provide a written document with methods, findings, and recommendations.</td>
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<tr>
<td></td>
<td>Complete a service or research project designed to improve the services of the Pharmacy ICCE. Prepare a manuscript suitable for publication in a peer-reviewed biomedical journal. Editorial assistance by the preceptor is required.</td>
</tr>
<tr>
<td></td>
<td>Complete disease-specific appendix</td>
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<td></td>
<td>Prepare and present an ACPE-approved continuing education seminar.</td>
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<td></td>
<td>Complete all Psychiatric Pharmacy On-call Service requirements as assigned.</td>
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<td></td>
<td>Complete all staffing requirements as assigned.</td>
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<td></td>
<td>Present project at an approved local, national, regional or state meeting.</td>
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<td></td>
<td>Evaluate 4 student Grand Rounds presentations throughout the year</td>
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Appendix U

Medical University of South Carolina – MUSC Health
PGY2 Solid Organ Transplant Residency

About MUSC Health

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), the state’s only publicly assisted academic health sciences center. Comprising 1,627 beds, some 100 outreach sites, the MUSC College of Medicine, the physicians’ practice plan, and more than 200 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. As the state’s only publicly assisted, integrated network of teaching hospitals, MUSC Health is dedicated to training future generations of competent, compassionate health care providers to serve the patients of South Carolina and beyond.

In Charleston, MUSC operates an 800-bed medical center, which includes a nationally recognized children’s hospital; the Ashley River Tower, with a focus on cardiovascular, digestive disease, and surgical oncology; Hollings Cancer Center, the state’s only National Cancer Institute-designated facility; a Level I trauma center; an Institute of Psychiatry, and the state’s only transplant center. In 2018, for the fourth consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

Founded in 1824, MUSC is a premier, comprehensive academic health sciences center at the forefront of the latest advances in health care. The 16,400 MUSC employees include world-class physicians, specialty providers and scientists who deliver groundbreaking research and technology. For more information, visit http://muschealth.org

Purpose Statement:

PGY2 pharmacy residency programs build on Doctor of Pharmacy (Pharm.D.) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in advanced or specialized practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care that improves medication therapy. Residents who successfully complete an accredited PGY2 pharmacy residency should possess competencies that qualify them for clinical pharmacist and/or faculty positions and position them to be eligible for attainment of board certification in the specialized practice area (when board certification for the practice area exists).

Program Description:

The PGY2 Solid Organ Transplant Residency Program is designed to develop accountability; practice patterns; and expert knowledge, skills, attitudes, and abilities in each respective advanced area of solid organ transplant pharmacy practice. PGY2 solid organ transplant residents throughout the year will: acquire the needed knowledge for skillful problem solving of solid organ transplant related issues, refine their problem-solving strategies, strengthen their professional values and attitudes, and advance the growth of their clinical judgment. Specifically, this specialty residency is designed to train pharmacists to care for an organ transplant recipient. Training will be focused in immunology, infectious disease, primary care, and critical care, with opportunities to care for patients in the inpatient and outpatient setting. The resident will also have the opportunity to care for pediatric abdominal transplant recipients during their required abdominal transplant surgery rotations and may elect to care for pediatric heart transplant patients in the pediatric cardiovascular critical care unit for an elective rotation. Therefore, the solid organ transplant residency provides residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experiences and knowledge and transforming both into improved medication therapy for patients.
Intended Outcomes:

- To develop competent specialized transplant clinical specialists with an understanding of rational drug therapy and the ability to utilize and expand their experience in clinical pharmacy practice, research, and education.
- To provide a broad scope of in-depth transplant experiences, which will lead to an advanced level of knowledge and enhance the resident's ability to design, implement, provide, and improve clinical pharmacy services.
- To develop future leaders in clinical transplant pharmacy practice and education.
- To provide the resident an opportunity to participate in clinical and evaluative research in the solid organ transplant population.
- To enhance and expand the resident's skills in the overall management of the complex, critically ill transplant recipient.

Listing of Current Preceptors:

**Holly Meadows, Pharm.D., BCPS**  
Clinical Pharmacy Specialist/Transplant  
Practice/Research: Transplant

**Felicia Bartlett, Pharm.D.**  
Clinical Pharmacy Specialist/Transplant  
Practice/Research: Transplant

**Neha Patel, Pharm.D., BCPS**  
Clinical Pharmacy Specialist/Transplant  
Practice/Research: Transplant

**Caroline Perez, Pharm.D., BCPS**  
Clinical Pharmacy Specialist/Transplant  
Practice/Research: Transplant

**Jackie Hawn, Pharm.D**  
Clinical Pharmacy Specialist/CTICU  
Practice/Research: Cardiothoracic Surgery

**Joe Mazur, Pharm.D., BCPS**  
Clinical Pharmacy Specialist/MICU  
Practice/Research: Critical Care

**Carolyn Magee, Pharm.D., BCCCP**  
Clinical Pharmacy Specialist/MSICU  
Practice/Research: Critical Care

**David Taber, Pharm.D., MS, BCPS**  
Clinical Research  
Practice/Research: Transplant

**Nicole Pilch, Pharm.D., MSCR, BCPS**  
Quality and Compliance Director, Transplant  
Practice/Research: Transplant

**Barbara Wiggins, Pharm.D., BCPS, BCCCP**  
Clinical Pharmacy Specialist/CVICU  
Practice/Research: Cardiology
Residency Program:

The resident must have previously completed a pharmacy practice residency or have an equivalent level of experience in hospital pharmacy practice prior to entering this specialized residency program. The residency is designed to provide a diverse experience, while focusing on the needs of the individual resident. Residents may tailor elective rotations to meet their particular goals and career needs. Residents are provided with formal written evaluations following each monthly rotation in order to provide for an optimal experience. Residents and advisors/RPD will complete a quarterly self-evaluation to assure compliance with self-determined goals and the ASHP Residency Learning System. Residents will rotate through adult inpatient and ambulatory experiences with opportunities to care for inpatient pediatric transplant patients during their abdominal transplant rotation and on call experiences. Residents may elect to complete dedicated pediatric transplant learning experiences in the inpatient and/or outpatient setting.

Residency Structure:

- Transplant on-call weekends and after hours coverage
- Clinical staffing in adult institution in solid organ transplant populations
- Minimum types of monthly rotations:
  - Inpatient abdominal organ transplant (2 months – required)
  - Inpatient Heart/Lung Transplant, LVAD, advanced heart failure (1 month – required)
  - Cardiothoracic Surgery or Cardiovascular Intensive Care (1 month – required)
  - Ambulatory adult transplant clinic (2 months – required)
  - Orientation if the resident did not complete PGY1 residency training at MUSC (1 month)
    - Limited orientation for residents who did complete PGY1 residency training at MUSC
  - The remainder of rotations are customized to fit the resident’s needs and interests, including MICU, MSICU, Internal Medicine, Infectious Diseases, and Transplant Quality and Compliance
- Teaching requirements:
  - ACPE-accredited seminar (1 hour)
  - 1 additional presentation is required (1 hour) outside of the department of pharmacy and may include:
    - Transplant Grand Rounds
    - Internal Medicine Grand Rounds
    - Heart Failure Conference/Cardiology Fellows Conference
  - Monthly in-service to transplant surgery medical students, interns, and residents regarding basic principles of immunosuppression and MUSC transplant protocols
  - Didactic lecture to P2 and P3 pharmacy students in transplant/immunology elective (2 hours)
  - Weekly small group discussions for all learners on transplant rotations
- Transplant Protocol development:
  - Participate in the development of at least one new transplant protocol
  - Present protocol to transplant team
- Resident Research Project:
  - Design and lead research efforts for the transplant research team
  - Expectation is for abstract with results to be submitted to international transplant meeting (ISHLT or ATC) by the fall abstract deadline
- Medication Use Evaluation:
  - Group project
  - Based on hospital or transplant needs

Manuscript
  - Development of manuscript
  - Suitable for publication before the end of the residency year

Residency Preceptor Expectations:

Each clinical preceptor will be responsible for the coordination of their own learning experience, and be able to modify accordingly with the assistance of the Residency Program Director (RPD) should the resident need remediation as far as residency goals are concerned. The residency preceptor will exhibit the characteristics and aptitude necessary for residency training including the mastery of the four preceptor roles fulfilled when teaching clinical problem solving (direct instruction, modeling, coaching and facilitation). The residency preceptor will guide and monitor the resident’s activity and service throughout the learning experience. The residency preceptor will provide ongoing formative and summative evaluations of the resident’s performance, with the goal of advancing the resident’s competency on the specific goals assigned to the experience. For preceptors who did not meet the ASHP requirements to be a PGY2 solid organ transplant preceptor, the preceptor will participate in the preceptor-in-training development program with a solid organ transplant preceptor as their mentor/advisor. Prior to becoming a full preceptor for the PGY2 solid organ transplant residency, a preceptor-in-training must have the preceptor development plan signed by the PGY2 solid organ transplant RPD attesting to the preceptor meeting the qualifications to be a PGY2 solid organ transplant preceptor.

Specific preceptor responsibilities:
- Understand the resident’s responsibilities to the residency experience and to ongoing activities such as projects, lectures, student discussions, manuscript preparation.
- Develop and maintain goals and objectives for the specific residency teaching learning experience(s).
- Review the resident’s development plan and resident’s previous performance. Modify the learning experience accordingly.
- Orient the resident to the rotation’s expectations and monitor/evaluate/critique the resident’s performance during the experience.
- Provide the resident with both a verbal and written midpoint and final evaluation; complete the final summary PharmAcademic evaluation by month’s end as outlined in the residency manual. Preceptors will be held accountable to completing PharmAcademic evaluations in a timely manner through their annual performance evaluations for the medical center.
- Advise the RPD of any appropriate interventions that may be needed relevant to the resident’s performance.
- Actively participate in an annual feedback session in which preceptors and the RPD consider overall program changes based on evaluations, observations, and direct resident feedback and surveys.

Residency Advisor Role:

The Residency Advisor (appointment by the RPD) will be responsible for the supervision, guidance and ongoing evaluation of the resident’s progress throughout the residency, as well as serve in an informal professional mentoring role (examples include preparation for future career planning roles, work-life balance, residency experiences, and conflict-resolution).
Specific Resident Responsibilities:

The residents’ role is that of a student, novice practitioner, and emerging clinician. The resident is to participate in ongoing clinical services with the assistance of the residency preceptor and develop their skill set into a competent practitioner. The resident must accept and apply constructive criticism, in addition to performing honest and thoughtful self-evaluations on their performance.

In order to promote an effective and productive residency experience, the relationship between a resident and rotation preceptor must be highly communicative, and a meaningful dialogue must be achieved. Specifically, the resident will:

- Sign off on the learning experience orientation form on the first day of each new clinical rotation.
- Complete PharmAcademic evaluations in a timely manner – outlined in the current MUSC residency manual. This involves project work, MUE work, seminar preparation, and any other lecture or inservice/presentation that will require preceptor feedback. All evaluations should be completed by the last day of the learning experience, but no later than 7 days after the completion of the learning experience. Paid time off, outside of unplanned emergencies/sickness, will not be approved unless there are no overdue PharmAcademic evaluations.
- Understand the preceptor’s expectations for daily activities, services provided and preceptor contact.
- Maintain the disease-state appendix for review at each quarterly discussion with the advisor and/or RPD.
- Participate in pharmacy activities (e.g., rounds, patient care conferences, lectures, departmental meetings, clinical staff meetings, seminars, and Grand Rounds) in accordance to the current MUSC residency manual.
- As outlined by the clinical preceptor, provide a detailed account of activities as they relate to the goals and objectives of the learning experience.
- Maintain active communication with the preceptor, advisor and/or RPD concerning any planned off-service activities (e.g., meetings, seminars, projects, staffing, on-call commitments) that the resident will be participating in during the rotation.

These expectations will be discussed with the resident during the orientation month.

Clinical Service Responsibilities:

- Monthly rotations
- 32 hours per month providing pharmaceutical care through following experiences:
  - On call weekend responsibilities
  - Weekend or Friday night clinical staffing

Individual Learning Experience Evaluations and Grading:

The resident should successfully complete and achieve all of the required outcomes according to ASHP Educational Outcomes, Goals and Objectives for PGY2 solid organ transplantation residency. The resident is required to demonstrate proficiency in 95% or above of all activities linked to these specific outcomes via the various goals and objectives assigned from the learning experiences to successfully complete the MUSC program. There can be no “needs improvements” on any goals or objectives for the residency year in order to successfully graduate from the program. The resident will first observe, learn, act, and then master a particular activity, which will deem them having achieved that objective.
Selection of Residency Candidates

Qualified applicants must have completed a PGY1 residency or receive documentation of equivalent experience through ASHP. The MUSC Pharmacy Program uses the PhORCAS Application System through ASHP. All application materials must be submitted through the applicant portal on ASHP’s website. The deadline for receipt of a complete application packet is December 31.

Completed applications include:

- Letter of intent (uploaded with application)
- Curriculum vitae (uploaded with application)
- Three references completed by healthcare professionals in PhORCAS who can attest to the applicant’s practice abilities and aptitudes
  - At least one reference must be from an immediate supervisor
  - At least one letter must be from a clinical preceptor
- Official transcripts of all professional pharmacy education

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For further information contact:

Residency Program Director
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