PGY2 Residency in Critical Care

Residency Manual

Vanderbilt University Medical Center
Nashville, Tennessee

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Purpose

The purpose of the PGY2 residency in critical care pharmacy is to transition PGY1 residency graduates from generalist practice to specialized practice that meets the needs of critically ill patients. PGY2 residency graduates exit equipped to be fully integrated members of the interdisciplinary critical care team, able to make complex medication and nutrition support recommendations in this fast-paced environment. Training focuses on developing resident capability to deal with range of diseases and disorders that occur in the critically ill. Special emphasis is placed on the complexities of multiple organ system failure and the difficulties imposed on care when patients require life-sustaining measures and interventions. Graduates of the critical care residency are experienced in short-term research in the critical care environment and excel in their ability to teach other health professionals and those in training to be health professionals. They also acquire the experience necessary to exercise leadership for critical care practice in the health system.
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<td><strong>All core rotations are available to be repeated as elective rotations</strong></td>
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**All rotations are 4 weeks in duration. A 4-week block will be designated as a transitional period dedicated to project time, other activities as appropriate, and conference attendance (e.g. ASHP Midyear Meeting, Society of Critical Care Medicine Congress, and Clinical Nutrition Week). Hospital Pharmacy Practice component will consist of weekend staffing in the TPN room and VUH Pharmacy areas as scheduled.**
**Educational Goals and Objectives**

**Outcome R1: Demonstrate leadership and practice management skills.**
R1.1 Exhibit essential personal skills of a practice leader.
R1.2 Contribute to the critical care practice area’s leadership and management activities.
R1.3 Exercise practice leadership.

**Outcome R2: Optimize the outcomes of critically ill patients by providing evidence-based medication therapy as an integral part of an interdisciplinary team.**
R2.1 Establish collaborative professional relationships with other members of the interdisciplinary critical care team.
R2.2 Prioritize the delivery of care to critically ill patients.
R2.3 Act in accordance with a covenantal relationship with the patient.
R2.4 Collect and analyze pertinent patient information.
R2.5 Design evidence-based therapeutic regimens for critically ill patients.
R2.6 Design evidence-based monitoring plans for critically ill patients.
R2.7 Recommend regimens and monitoring plans for critically ill patients.
R2.8 When appropriate, implement selected aspects of critical care patients’ regimens and/or monitoring plans.
R2.9 Evaluate critically ill patients’ progress and redesign regimens and monitoring plans.
R2.10 Communicate ongoing patient information.
R2.11 Document direct patient care activities appropriately.

**Outcome R3: Demonstrate excellence in the provision of training, including preceptorship or educational activities for health care professionals and healthcare professionals in training.**
R3.1 Provide effective education or training to health care professionals and health care professionals in training.

**Outcome R4: Demonstrate the skills necessary to conduct a critical care pharmacy research project.**
R4.1 Conduct a crit care practice research project using effective project management skills.

**Outcome R5: Participate in the management of medical emergencies.**
R5.1 Participate in the management of medical emergencies.

**Outcome E1: Perform quality improvement activities aimed at enhancing the safety and effectiveness of medication-use processes in the critical care area.**
E1.2 Design and implement quality improvement changes to the critical care area’s medication-use processes.

**Outcome E2: Provide formalized critical care medication-related information.**
E2.1 Provide concise, applicable, comprehensive, and timely responses to formalized requests for drug information pertaining to the critically ill from patients, health care providers, and the public.

**Outcome E5: Demonstrate skills required to function in an academic setting.**
E5.2.2 Prepare and deliver didactic instruction on a topic relevant to the specialized area of pharmacy residency training.

E5.2.4 Serve as a preceptor or co-preceptor utilizing the four roles employed in practice-based teaching (direct instruction, modeling, coaching and facilitation).

Custom Outcome E2: Demonstrate advanced skills in working with a specific technology or automation product.

E2.1 Serve as an expert resource for the management of a specific technology or automation system.
**Licensure**

All residents are licensed to practice pharmacy in the State of Tennessee. Residents obtain licensure to practice in the State of Tennessee prior to July 1st of their residency year. Verification of licensure occurs in accordance with Department policy.

**Benefits**

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<th>Educational leave</th>
<th>Full access to Biomedical Library</th>
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<td>Books directly related to the residency</td>
<td>Lab coats are the responsibility of the resident, but can be purchased through the hospital</td>
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<td>Two weeks paid vacation, select holidays</td>
<td>Sick leave</td>
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<td>Travel &amp; relocation expense <strong>directly related</strong> (moving company, rental, fuel, hotel) to the move – up to $1500</td>
<td>Financial support and professional leave for the University of Tennessee Annual Residency Program, the ASHP MYCM and the Annual Southeastern Residency Conference in Athens, GA, SCCM Annual Congress</td>
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<tr>
<td>Life insurance</td>
<td>Discounts at local merchants</td>
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<tr>
<td>Professional liability insurance supplied by the Medical Center</td>
<td>Limited financial support for presentations at Vanderbilt and outside the campus – depends on the residents activities at the meeting (officer, presentation, etc)</td>
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<td>Health care plan options, including an HMO plan</td>
<td>All ACPE approved continuing education provided by the Department of Pharmaceutical Services</td>
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<td>Payment of Tennessee Board of Pharmacy license fee in June – license fee and professional tax. We do not pay NABPLEX fees or for reciprocation of license to TN. We will pay for transfer of NABPLEX scores.</td>
<td>Immunizations and other health related costs required by the Medical Center</td>
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<tr>
<td>Photocopying directly related to residency</td>
<td>House staff &amp; hospital orientation programs</td>
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<tr>
<td>Office space &amp; computer workstation</td>
<td>Competitive stipend</td>
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<td>Employee Assistance Program</td>
<td>Employee Wellness Program</td>
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<td>Concierge Service</td>
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<tr>
<td>Provision of personal electronic devices will be supplied by the hospital if they are essential to the work of the resident.</td>
<td>Membership in professional organizations is the responsibility of the resident</td>
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Purchase of software, books, or other materials must be directly related to the achievement of residency objectives, and must be approved beforehand by the Residency Director.
Time Off and Swapping Shifts

Scheduled Time Off/Comp Days:
Time off per month is provided in association with weekends worked. This time should not be accrued under normal circumstances. For every 1 (one) “Staff” weekend, the resident will be allowed one comp day that must be taken within 30 days of accrual. For every 2 (two) “Clinical” weekends, the resident will be allowed one comp day that must also be taken within 30 days of accrual.

Vacation Days:
Fifteen (15) vacation days are accrued during the residency year. A minimum of ten (10) days are signed up for in advance by each resident; these days must be identified and requested by August 15th of the residency year. Five (5) days are taken prior to January 15th of the residency year. Up to five (5) of the accrued days may be paid out to the resident at the completion of the residency. The residency program director accepts all requests for vacation and communicates approvals/denials based on available time off.

Holidays:
Vanderbilt recognizes seven holidays during the year: July 4th, Labor Day, Thanksgiving Day, Christmas Eve, Christmas Day, New Years Day and Memorial Day. The Pharmacy Department schedules holiday coverage in groupings that also include the day after Thanksgiving and New Years Eve. Residents are required to work three (3) holidays as scheduled by the department and outlined in the department Holiday Rotation policy. Vacation is not to be used for an assigned holiday to receive the day off. Unassigned holidays are arranged with the resident’s current preceptor as to if the holiday will be off or a different day will be taken for the holiday. Per department policy, if a holiday is worked a different day is taken off within 90 days of the holiday.

Personal Days:
Three (3) personal days are accrued over the year and must be taken.

Sick Time:
Eight (8) hours of sick time are accrued on a monthly basis. This time is to be used in accordance with University and Department policy. Residents alert their current preceptor and program director of their absence due to unexpected illness as soon as practicable. If absence due to unexpected illness impacts a staffing assignment in one of the pharmacies: a call is made to that pharmacy at least one hour ahead of beginning of shift. The resident also communicates this absence with his/her program director.

Swapping Shifts:
Because TPN call correlates with the resident’s staffing responsibilities AND the resident’s staffing mentor is also on the schedule, swapping weekend/holiday shifts
must be limited to (1) swap during July-December and (1) swap during January-June. In addition, if a swap is made, TPN call coverage must be arranged accordingly.

*** No more than five days off may be taken within any single block rotation experience. All swaps and time off must be approved by preceptor/staffing mentor and forwarded to RPD for final approval. ***

Departmental Policies Applicable to Pharmacy Residents

Vanderbilt Human Resources Website: http://hr.vanderbilt.edu/

VUMC Website: http://vumcpolicies.mc.vanderbilt.edu

VUH Pharmacy Residency Policy: http://vumcpolicies.mc.vanderbilt.edu/E-MANUAL/Hpolicy.nsf/AllDocs/A09FD26D92F6770886257289005AB35F

Residency Experience Activities

Orientation:
The resident will complete a hospital and departmental orientation.

Didactic Training:
The resident will complete formal didactic training via several multi-disciplinary critical care lectures and certifications throughout the year. These will consist of the following:

   **Adult Cardiac Life Support:** ACLS certification is required. For those not already certified, certification must be completed by the end of August. Mock codes will be performed and evaluated during the resident’s CVICU learning experience.
   **Fundamental Critical Care Support:** FCCS certification is required. There may also be opportunities to provide lectures for future FCCS courses after the resident has obtained appropriate certification.
   **SCCM Resident ICU Course:** The resident will be required to complete the online Resident ICU Course during the July orientation month.
   **Therapeutic Exchange / Fellows Conference:** These are weekly conferences held at noon on Thursdays. Therapeutic Exchange is coordinated by the pharmacy department for pharmacists and technicians to obtain continuing education hours. Fellows Conference is coordinated by the surgical critical care division. Weekly attendance at either one or the other (according to topic) is strongly encouraged throughout the year.
The resident will complete a set of clinical rotation learning experiences designed to enable the resident to meet the program goals and objectives as well as the resident’s career goals and interests. The experiences are established between the resident and the program director.

**Hospital Pharmacy Practice:**
The resident will work in a guided hospital practice scheduled certain weekends and on selected holidays. He/she will gain experience in various hospital pharmacy staffing functions in central pharmacy. The TPN compounding room under the mentorship of the IV room manager, with responsibilities to include: becoming familiar with TPN compounding methods and issues, verifying TPN orders, checking TPN preparations, and supervising technicians. In addition, the resident will fulfill further clinical duties as part of the nutrition support team on-call program. The resident will obtain patient information prior to on-call weekend (i.e. participate in Friday nutrition support rounds) and provide continuing patient information following the weekend (i.e. provide updated patient worksheets or participate in Monday nutrition support rounds). In addition, the resident will gain staffing experience in the OR satellite pharmacy.

**Clinical on Call:**
The resident is responsible for ensuring that the aminoglycoside, heparin and warfarin dashboards are monitored and “checked off” on assigned weekends and holidays. In addition, the resident will respond to consults via the consult pager and provide follow up on each consult or drug information request. These will be discussed with a backup Clinical Pharmacist or other designated Pharmacist who is also working on the weekend. During the week, the resident will cover dashboards and consults for clinical pharmacists who are out of the office when the clinical pharmacist does not have another resident or other support. In addition, the resident will be available to medical, nursing and pharmacy staff for drug information questions as needed.

**Research Project:**
The resident will conduct a research project over the course of the residency year. This project will include idea development, literature review, study design, IRB submission, data collection, data analysis, data interpretation, oral presentation and a written manuscript.

**Quality Improvement Project:**
The resident will conduct a quality improvement project, to be formally evaluated during the last rotation. This project will include the design and implementation of a quality improvement change to the critical care area’s medication-use process.

**Teaching:**
The resident is expected to serve as a mentor and role model to pharmacy students and PGY1 residents. Faculty appointment at the University Of Tennessee College Of Pharmacy is encouraged. The resident will participate in the University Of Tennessee
College Of Pharmacy Critical Care Selective course offered in the spring. The resident can consider the Teaching Certificate offered via Belmont School of Pharmacy upon approval of the Residency Program Director.

**SICU Process Improvement Committee**
This is a monthly meeting among the SICU faculty and managerial staff. The resident will participate on this committee and present pertinent pharmacy-related news/updates.

**Seminars:**
Formal presentations will be required during the year:
- **Pharmacy Therapeutic Exchange:** This presentation should be a critical care pharmacy-related topic that includes some controversy and/or is a hot topic. This is a 60 minute ACPE-approved presentation. This is not just a review of a disease state; primary literature is to be used as a guiding force to put this presentation together. This will include a self-evaluation and a formal evaluation. Objectives are to be submitted 30 days prior to presentation date.
- **Surgical Critical Care Fellows Conference:** This presentation should be a critical care pharmacy-related topic. This is a 60-minute CE presentation, and should not be the exact same presentation used for Therapeutic Exchange. The resident should contact the fellow in charge of the conference schedule to select a date.
- **Nursing Residency-Critical Care Tract Lecture:** This 1-hour lecture will be provided to residents in the Vanderbilt University Hospital nurse residency program.
- **Critical Care and/or Nutrition Selective Lecture (UT College of Pharmacy)**

**Journal Club:**
This is a longitudinal activity and attendance is required at all sessions. In order to further develop evaluation and precepting skills, PGY2 residents will be assigned to formally evaluate two PGY1 journal club presentations during the year. The resident will also be required to present and participate in the Anesthesia/Critical Care Journal Club series.

**Case Conference:**
This is a longitudinal activity and attendance is required at all sessions. PGY2 residents will formally present (1) case presentation during the year. The case presented should revolve around a critical care pharmacy-related topic, include primary literature, and be a case in which the resident was directly involved.

**Newsletter/Fast Facts:**
The PGY2 resident will contribute (1) “fast fact” article to the departmental InPharmation newsletter.

**Medical Center Educational Programs:**
Noon conferences, departmental grand rounds, and other educational conferences are offered throughout VUMC. These are posted in the Vanderbilt publications. Residents are encouraged to attend various conferences related to specific rotations.

**Society Membership and Conference Attendance (TBD):**
- **Society of Critical Care Medicine:** Resident membership and active participation in SCCM is mandatory. Attendance at the annual congress meeting is also highly encouraged. The annual congress usually occurs in mid to late January or early February. If timing allows, it is highly encouraged that the resident attempts to submit an abstract related to the resident’s project for poster/podium presentation at the annual congress.
- **ASHP Midyear Clinical Meeting:** The resident may be required to attend the ASHP Midyear meeting to support and represent the department and to assist with future resident recruitment.

**Residency Notebook:**
The resident will maintain a residency notebook which shall be a complete record of the resident’s program activities. The resident is encouraged to maintain the notebook throughout the year. The notebook will be submitted to the residency program director at the conclusion of the residency training program and will be a requirement for successful completion of the program. The notebook should include the following:
- Residency self-evaluation and planning form
- Preceptor summative evaluations for all learning experiences
- Resident self-evaluations for all learning experiences
- Resident evaluations of preceptors and learning experiences
- Quarterly evaluations
- Custom evaluations
- Record of all certifications, in-services, presentations, and seminars given
- All research and QI project documentation

**Evaluations:**
All evaluations shall be completed in ResiTrak. The resident will print copies for his/her residency notebook. The performance of the resident will be based upon the use of predetermined goals and objectives based on the ASHP Residency Learning System (RLS) Goals and Objectives. The following evaluation strategies will be utilized:
(1) Resident self-evaluation: Each preceptor provides periodic opportunities for the resident to practice and document criteria-based, formative self-evaluation of aspects of their routine performance. Each preceptor provides an opportunity for the resident to document a criteria-based **summative self-assessment of achievement of the educational goals and objectives assigned to the learning experience**. The resident shall complete an **end-of-the-year self-assessment**.

(2) Preceptor evaluation of resident: Each preceptor shall conduct and document a criteria-based, **summative assessment of the resident’s performance on each of the goals and objectives assigned to the learning experience**. Preceptor summative evaluations are conducted at the conclusion of the learning experience (or at least quarterly for longitudinal learning experiences) and reflect the resident’s performance at that time. Each resident evaluation is discussed by the preceptor with the resident and RPD, and the reviews are documented by each.

(3) Resident evaluation of preceptor and learning experience: The resident shall complete an **evaluation of the preceptor and of the learning experience** at the completion of each learning experience.

(4) The preceptor and resident will review the learning experience description on the first day of rotation.

**Recruitment:**
Residents will assist in the resident recruitment and candidate selection process.

**Research Project**

The resident shall, under the guidance and supervision of a primary mentor, develop and complete a research project. The project is to be of benefit to the individual, the pharmacy department, and the institution, and shall be presented at a regional or national meeting. Project ideas and designs will be reviewed by the program director. The program director will serve as a consultant and advisor for the residency project.
Residency Project Description
Worksheet
July 2010

__________________________________________
Resident: ________________________________
Project Advisor: __________________________

Date of Initiation: __________________________
Date of Completion: _________________________

Responsible Investigators: ____________________

Department(s) Involved: ______________________

Key Personnel to Obtain Approval From: ______

Question to be Answered: ______________________

Expected Outcomes of the Study: ______________

Rationale for the Study: ________________________

Defining Measurements: _______________________

Data that will be Collected: ____________________

Databases to Study or Create: __________________

Data Analysis: ________________________________

Description of Results: _________________________

Benefit to the Resident: _________________________

Benefit to the Department: _______________________

Likelihood of Publication: _______________________

Commitments: ________________________________
   Resident    Preceptor    Other

Revised May 2010
## Past Residency Projects

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<th>Year</th>
<th>Resident</th>
<th>Title</th>
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<tr>
<td>2009-2010</td>
<td>Ashley Quintili</td>
<td>Initial Dosing and Monitoring of Argatroban</td>
<td>Presented at SERC, Athens, GA 2010</td>
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