Appendix G Internal Medicine

PGY2 Internal Medicine Pharmacy Residency Program Overview

National Matching Service Code: 772256
https://health.ucsd.edu/specialties/pharmacy/residency/Pages/internal-medicine.aspx

The UC San Diego Health Department of Pharmacy offers a one-year specialty residency in internal medicine pharmacy practice beginning August 1st or upon licensure in California (see below).

**Scope:**
UC San Diego Health consists of three acute care hospitals (UC San Diego Medical Center in Hillcrest, Sulpizio Cardiovascular Center, and Jacobs Medical Center which includes former Thornton Hospital) and associated outpatient clinics. UC San Diego Health is also affiliated with Rady Children’s Hospital-San Diego, the Veterans Affairs San Diego Healthcare System, and the Sharp Memorial Hospital Joint Blood and Marrow Transplant Program. The Health System is affiliated with the UC San Diego School of Medicine and the UC San Diego Skaggs School of Pharmacy and Pharmaceutical Sciences (SSPPS). The Department of Pharmacy provides clinical services in both the inpatient and outpatient setting to a broad spectrum of patient populations including internal medicine, surgery, cardiology, oncology, solid organ transplant, bone marrow transplant, infectious diseases, nephrology, cystic fibrosis, pulmonary hypertension and HIV/AIDS.

This specialty residency balances the provision of direct patient care to internal medicine patients in both the inpatient and ambulatory care setting with research and teaching opportunities, and is tailored to the individual. Emphasis will be placed in providing excellent pharmaceutical care in conjunction with the multidisciplinary team as well as the facilitation of care transitions when possible. The resident will also have access to a wide variety of elective rotations.

**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.

**Program Description:**
UC San Diego Health is a university-affiliated teaching hospital which provides the unique capability to engage each of our residents in direct patient care activities, research, administration and project management, and teaching. PGY2 Internal Medicine residents will gain the skills necessary to function as the primary internal medicine pharmacist during their required core internal medicine learning experiences, with the expectation that the resident will handle all aspects of the medication process as well as the facilitation of safe and effective discharges in patients deemed high risk for readmission. Outside of the core internal medicine learning experiences, other learning experiences that will be required in order to broaden the resident’s experiences and scope of practice include the continuation of care transitions, management of patient populations at high risk for readmission (advanced heart failure, HIV/ID) and management of critically ill patients (ICU).

Primary clinical responsibilities will include rounding with assigned teams, validating pharmacy orders, performing pharmacokinetic monitoring, as well as designing, recommending, monitoring and evaluating patient-specific therapeutic regimens that incorporate the principles of evidence-based medicine. When opportunities are available, the resident will also be expected to assume oversight and responsibility for pharmacy trainees (including fourth-year pharmacy students and PGY1 pharmacy residents). Additionally, residents will assume responsibility for all medication management activities for their service, including transitions between different locations or levels of care. The resident will become proficient at resolving medication system issues when appropriate to assure safe
transition to community pharmacies and providers. The resident will also become skilled in providing education to multiple audiences: patients, caregivers, providers and other members of the multidisciplinary health care team.

Teaching activities may include presentations (grand rounds, clinical forums, journal clubs, topic discussions, etc.), involvement with UC San Diego SSPPS courses (e.g. conference leader for third year therapeutics course), and clerkship preceptorship of PGY1 pharmacy practice residents and fourth-year pharmacy students on clinical rotations. The ability to work independently and to supervise pharmacy students and residents will be emphasized. The resident will also be involved in a research project where scientific writing is strongly emphasized and the preparation of a manuscript suitable for publication will be expected.

Number of residency positions available: 2

Resident Pay and Benefits: Refer to UC San Diego Health Pharmacy Residency website (https://health.ucsd.edu/specialties/pharmacy/residency/Pages/Salary-and-Benefits.aspx) for details on salary and benefits

Requirements of Residents Prior to Starting the Program:
If matched with the UC San Diego Residency Program, matched candidates must have all of the following:
1. Graduated from an ACPE-accredited school of pharmacy with a Doctor of Pharmacy degree
2. Successfully completed an ASHP-accredited PGY1 pharmacy residency.
   a. Upon receipt of application to the program, the RPD will reach out to the PGY1 program director to assess good standing in the program
   b. A signed residency certificate will be required prior to beginning residency.
3. Obtained California pharmacy licensure prior to beginning residency.
   a. The residency is expected to begin on the last Monday of July, or first Monday of August, depending on the Human Resources orientation schedule. However, the resident must have obtained their California pharmacist license prior to beginning residency (absolute deadline to start = November 1st).
   b. If the resident is not licensed by November 1st, they will be dismissed from the residency. The residency offer may be rescinded if the resident does not take the California Board of Pharmacy law exam prior to August 1st or does not pass the California Board of Pharmacy law exam on the first attempt.

Application:
All applicants must be enrolled in the Resident Matching Program. To facilitate this enrollment process and for further information, please visit the following website: http://www.natmatch.com/ashprmp. Applications will be accepted when PhORCAS opens and are due by December 31st. Applications should be submitted through PhORCAS and include the following:

1. Letter of intent. Please address the following item in your letter including your own personal goals to achieve this:
   • Address your vision of an internal medicine pharmacist practicing at the top of their license.
2. Current Curriculum Vitae with all experiential completed and anticipated rotations as well as pharmacy work experience.
3. Three electronic references are required. At least two of the references should be from preceptors who can directly comment on your clinical and practice skills.
   **Note:** Please have recommendation writers complete the electronic reference form within PhORCAS with detailed characteristic and narrative comments. One to two areas of improvement or constructive feedback that the recommender feels the candidate should continue to work on as a PGY2 resident should be identified. No separate letter of recommendation is required.

On-site interviews will be held during late January through February.

Program Structure:
- 2-4 weeks of orientation/training/research (duration determined by the resident’s previous experience)
- Required learning experiences: (Block, 5 weeks each)
• Internal Medicine Hillcrest
• Internal Medicine La Jolla
• Internal Medicine Hematology/Oncology
• Family Medicine
• Advanced Heart Failure
• HIV & Infectious Disease
• Cardiovascular ICU

- Longitudinal learning experiences (half-day per week block)
  - Therapeutics Conference (10 weeks)
  - Heart Failure / Cardiomyopathy Clinic (20 weeks)
  - Elective (1 block, 20 weeks)

- Elective learning experiences: (2-Block, 5 weeks each)
  - See full list below

- Staffing (16 weekends, annually) (Longitudinal, 12 months)
- Resident project/research (Longitudinal, 12 months)
  - Includes participation in Research Primer Series

- Practice Management (Longitudinal, 12 months)
  - Committee Participation (alternate MERP La Jolla 6 months and MERP Hillcrest 6 months)
  - Practice Management (MUE, Order set, Monograph/Drug class review)
  - Internal Medicine Appendix

- Effective Education (Longitudinal, 12 months)
  - Journal club presentations (3 required, may choose to facilitate PGY1 journal club or present at ACCP Internal Medicine Journal Club for one of the three)
  - Clinical forum presentation (3 required)
  - In-service (3 required, nursing, pharmacy technicians, and one audience of choice)
  - Grand Rounds (1 required, may be completed with co-resident)

**Required Learning Experiences:**
Descriptions of each learning experience can be found in [PharmAcademic](#).

PGY2 residents will gain the skills necessary to function as the primary internal medicine pharmacist during their required internal medicine learning experiences as well as the primary pharmacist within the other core learning experiences. The resident will also be expected to handle all aspects of medication management from admission through discharge (and beyond when applicable). The resident will be expected to build relationships with each interdisciplinary team in a variety of settings and to work proactively with nurses, case managers, social workers, physicians and physician extenders to help manage patients during hospital admission and to successfully transition patients from the hospital to the home or other healthcare setting. Daily activities will include: attending daily multidisciplinary rounds, managing patients across the continuum of care, performing medication reconciliation at both admission and discharge, collaborating with physicians and other health care providers to discuss optimal pharmacotherapy, participating in patient education/consultation, performing pharmacokinetic monitoring on all therapeutically monitored drugs, and overseeing and directing PGY1 resident and pharmacy student activities. This integration of staffing and clinical services prepares residents for any type of practice environment they may encounter in their future jobs by emphasizing the development of essential skills required for an advanced pharmacy practitioner including independent practice skills as well as the ability to multi-task and prioritize duties and responsibilities.

**Elective Learning Experiences:**
Descriptions of each learning experience can be found in [PharmAcademic](#).

There are a variety of elective learning experiences from which the resident can choose. This will allow the resident the flexibility to tailor their PGY2 experience to an area of interest. Elective learning experiences will generally be scheduled in the second half of the residency year (after the majority of the required rotations are successfully completed). Electives can be selected from the list below and there will also be opportunities to develop new elective learning experiences:
• Ambulatory Care
• Cardiothoracic Transplant and Medical Assist Devices
• Emergency Department
• Infectious Disease
• Medical Intensive Care
• Neurology Critical Care
• Oncology Infusion Center

Longitudinal Clinic Experience:
Descriptions of each learning experience can be found in PharmAcademic.

The resident will have two longitudinal experience blocks in which to participate throughout the year with the Heart Failure / Cardiomyopathy Clinic being a required learning experience. Additional elective longitudinal clinics:
• Chronic Kidney Disease
• Diabetes Self-Management
• Internal Medicine Clinic
• Kidney Transplant Clinic

Staffing:
Staffing will be incorporated into the residency experience with weekend shifts that provides the opportunity for PGY2 residents to staff transitions of care shifts as well as traditional inpatient weekend staffing. The PGY2 residents will be required to staff 16 weekends (9 weekends of TOC staffing and 7 weekends of inpatient traditional/operations staffing), which includes 1 minor holiday weekend AND 1 major holiday (Thanksgiving, Christmas, or New Year’s). This will effectively reduce holiday pay consistent with the holidays worked. To help provide more formative feedback, residents are expected to seek feedback from at least one staff member each weekend they staff. The feedback will be solicited via an online survey which can be found on the Pharmacy’s intranet page.

Research Project:
The resident will be responsible for conducting a research project throughout the academic year that will be completed and presented at the UC Collaborative Annual Pharmacy Leadership Conference or an equivalent conference. A Resident Research Primer Course has been developed by the UC San Diego Health Research Council to coach residents through the various aspects of the research process. PGY2 internal medicine residents who have not previously completed the Research Primer Course are required to attend. PGY2 internal medicine residents who have previously completed the Research Primer Course will required to attend some, but not all, meetings. They will be required to complete all competencies. Passing competency score is 80%.

More information can be found in the Resident Manual. If time allows or if residents received an already IRB-approved research project, the resident will be involved with the initiation of a second project. This initiation phase will involve defining the study design, writing up the protocol and beginning the IRB approval phase. This will facilitate subsequent internal medicine residents who can then finish the projects that were started the previous year. Research time will be given during the resident year.

Practice Management: The PGY2 resident will track their progress and development in the areas practice management, clinical quality improvement projects (if not a part of year-long resident project), medication use evaluation, order set review, drug class review or formulary monograph, and effective education or training to health care professionals or health care professionals in training through this longitudinal experience. Quarterly, the RPD and resident will complete a summative evaluation via PharmAcademic and update the resident’s customized training plan to track the resident’s progress. Items which are included and evaluated in this longitudinal rotation include:

Committee Participation: The resident will be required to participate in Medication Error Reduction Plan (MERP) Committee (6 months in La Jolla and 6 months in Hillcrest). The committee review medication use and strive to find ways to reduce errors at UCSDH. The resident will work with the pharmacist assigned to
that committee to be an active participant through meeting attendance and investigating medication related events and solutions.

**Practice Management:** The resident will be required to complete a formulary monograph or drug class review, order set review, and medication use evaluation. Each resident will be required to complete one annually. Residents may collaborate with the other internal medicine resident for completion.

**Internal Medicine Appendix:** The resident’s progress in covering disease states listed in the Appendix (topics listed individually in learning experience descriptions) will be tracked through provided check-list and quarterly in the customized training plan.

**Effective Education:** The resident will have opportunities to provide effective education through presentation of grand rounds (1 required during residency, may be done with co-resident), clinical forums (3 required during residency), journal clubs (3 required during residency), in-services (3 required during residency), didactic teaching opportunities and development of a manuscript for publication.

**Grand Rounds:** The resident will deliver a 1-hour CE lecture to the pharmacy staff regarding a topic in internal medicine. This presentation may be made in collaboration with their PGY2 Internal Medicine Pharmacy co-resident, with each resident presenting approximately 30 minutes of material. Please refer to the Residency Manual for more information on timelines, expectations, and evaluation strategies.

**Clinical Forums:** Residents are required to present three clinical forums during the year at our Pharmacy Clinical Forum. Clinical Forums are clinically-focused, 20-minute presentations based on a recent patient case. The resident is encouraged to discuss topics related to the ASHP Supplemental Appendix. All Clinical Forum presentations need to be presented to the project preceptor at least one week in advance for feedback and comments. Failure to do so will result in delay of the presentation. Please refer to the residency manual for more information and evaluation strategies.

**Journal Clubs:** Residents are required to present three journal club presentations during the year. Journal Club topics should be focus on critically analyzing a recently published journal article related to critical care pharmacotherapy. The resident may choose to facilitate a PGY1 Journal Club in lieu of performing the final one of their required journal club presentations. Presented journal clubs must be presented to the project preceptor at least one week in advance for feedback and comments. Failure to do so will result in delay of the presentation. For facilitation, the resident assumes the role of the clinical preceptor and should critically analyze the article, coach the PGY1 resident through their analysis, and facilitate the discussion on the day of the presentation. Facilitators should provide feedback on their analysis and thoughts of the PGY1 one week prior to their presentation. Please refer to the residency manual for more information and evaluation strategies.

**In-Services:** The resident is required to conduct 3 in-services during the residency year with 1 focused on pharmacy technicians ('tech talks') and 1 focused on nursing staff. The remaining in-service can target an audience of the resident’s choosing. The resident is expected to be proactive in determining the need for focused in-services as well as facilitating topics and logistics related to the in-service over the course of the residency year.

**Teaching - Skagg’s School of Pharmacy and Pharmaceutical Sciences:** Involvement with the UC San Diego SSPPS will vary but the resident is required to participate as a conference leader for one of the therapeutics courses. The resident may be asked to write up cases for the therapeutics conference based on real patient cases. Residents will also have multiple opportunities to directly precept students who are on the same learning experience as the resident.

**Teaching Certificate:**
Participation in the Teaching Certificate program is required unless resident has completed a teaching certificate program during his/her PGY1 and will be discussed on a case by case basis. Please refer to the Residency Manual for more information on these topics. If the resident elects to complete the Teaching Certificate, the RPD will work with the PGY1 RPD to add the resident to expected events.
Assessment Strategy – PharmAcademic:
The PGY2 Internal Medicine Specialty Residency Program uses the ASHP online evaluation tool called PharmAcademic, which is available for all ASHP-accredited pharmacy residency programs. This system, which is technologically supported by the McCreadie Group, supports the ASHP Residency Learning System (RLS).

Residents who are matched with this PGY2 specialty program are entered into PharmAcademic prior to their anticipated start date in August. The incoming resident completes two pre-residency questionnaires that help the RPD design a residency year that is tailored to the specific needs and interests of the resident:
- ASHP Standard Entering Interests Form
- Goal-Based Entering Interests Form

Residents’ schedules and assigned RLS Goals are entered into PharmAcademic. We have chosen to use the PharmAcademic evaluation tools for our Learning Experiences. For each Learning experience, the following Assessments are completed:
- Preceptor Assessment of Resident: Summative (for each Learning experience)
- Resident Self-Assessment: Summative-self (for each Learning experience)
- Resident Assessment of the Learning Experience
  - Resident assessment of Preceptor
  - Resident assessment of Learning Experience

Preceptors and residents are encouraged to exchange in ongoing, daily, verbal feedback throughout each learning experience. The resident and preceptors are trained and reminded throughout the year to complete evaluations in a thorough (quantitatively and qualitatively) and timely manner. To this end, evaluations may be used, not only as assessment tools, but as tools that preceptors may turn to for help in guiding residents to improve, grow and achieve both the residency program’s and the residents’ goals and objectives for the residency year. The RPD reviews all evaluations and solicits feedback from preceptors and residents to provide guidance to help the resident maximize the residency experience.

The resident will discuss individualized program goals and interests on a quarterly basis (Quarterly Update and Customized Training Plan) with the RPD to evaluate where they are in meeting the residency goals and to set or modify goals for the remainder of the residency program. The resident may request to meet with the RPD outside of this quarterly meeting, as needed, if their interests change throughout the year. The resident may request schedule modifications throughout the residency year and the RPD will make all efforts to accommodate these requests. Assessment tools will be adjusted as changes are made.

The resident will be expected to complete the all relevant exit evaluations well as a year-long evaluation of the residency program.

The results of these year-end program evaluations are reviewed by the RPD and internal medicine Residency Advisory Committee (RAC) for merit and the potential development of action plans in an effort to achieve continuous quality improvement.

Assessment Overview (PGY2 Internal Medicine)
It is the resident’s responsibility to initiate the evaluation process with each rotation preceptor prior to the end of each learning experience and to schedule at least quarterly meetings with the RPD.

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<th>Frequency</th>
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Local/Regional/National Meetings:
The residents will have the opportunity to attend various professional meetings throughout the year. The annual travel stipend is variable, based on funding. In the past, residents have received a set stipend for the year which they can use at their discretion for registration, travel, accommodations, etc. The cost of attending UC Collaborative Annual Pharmacy Leadership Conference (or an equivalent conference) will be deducted from the travel stipend, along with any other conferences the resident chooses to attend. Attendance at UC Collaborative Annual Pharmacy Leadership Conference (or an equivalent conference) to present their resident project is mandatory.

PGY2 Internal Medicine Competency Areas, Goals and Objectives (2017 Standard):
- Competency Areas: Categories of the residency graduates’ capabilities.
  - 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
- Educational Goals: Broad statement of abilities.
- Educational Objectives: Observable, measurable statements describing what residents will be able to do as a result of participating in the residency program.
  - The resident is encouraged to read detailed information about each goal at the ASHP website (click on “Internal Medicine Pharmacy – Effective 2017”).
  - For information about Goals and Objectives Taught/Taught and Evaluated in Learning Experiences, visit PharmAcademic, go the ‘Reports’ tab, and click on ‘Goals and Objectives Taught/Taught and Evaluated in Learning Experiences’.

PGY2 Internal Medicine Residency Requirements for Completion / Graduation:
- Successful completion of all learning experiences:
  - All learning experience objectives must be marked satisfactory progress (SP), achieved (ACH) or achieved for residency (ACHR) by the final evaluation of all learning experiences. Any expectations of the residents that are not met or learning objectives marked as needs improvement (N/I) from an on-demand or scheduled evaluation will result in a meeting between the learning experience preceptor, RPD, and the resident where a plan of correction will be formulated. Failure to complete the plan of correction may result in disciplinary action.
  - ≥90% of RLS objectives marked “Achieved for the Residency” by the end of the year (as evaluated by individual rotation preceptors or by the RPD upon final review of the resident’s progress). All patient care related objectives (Outcome R1: Patient Care) must be achieved.
  - Creation and completion of required presentations: 3 Journal Clubs, 3 Clinical Forums, 3 In-Services, 1 Grand Rounds
  - Research Primer Course
  - Completion of a residency project; including presentation at a suitable conference/meeting and completion of a project ‘write-up’ in a manuscript suitable for publication (does not need to be submitted for publication)
  - Twelve months minimum is allotted to successfully complete the core requirements. If a core learning experience must be repeated, then elective time shall be used. If the above requirements are not met in full by 90 days after the residency end, the residency certificate may be withheld at the discretion of the residency director.