

## Postgraduate Year One (PGY1) Pharmacy Residency

### SETTING

The VA Palo Alto Health Care System (VAPAHCS) is a 900 bed hospital and satellite outpatient clinic complex located in the greater San Francisco Bay Area of California. This major tertiary referral center consists of three medical center divisions and eight satellite outpatient clinics. The Palo Alto Division, located in the foothills of the Coast Range Mountains, is comprised of ambulatory care clinics, as well as medicine, surgery, acute psychiatry, spinal cord injury/polytrauma, geriatric care, hospice, and blind rehabilitation inpatient beds. The Menlo Park Division, located seven miles away from Palo Alto, serves primarily chronic psychiatric, nursing home, respite, and domiciliary patients. The Livermore Division, located 40 miles east of Palo Alto, cares primarily for subacute medicine and nursing home patients. Satellite clinics are located in San Jose, Monterey, Fremont, Livermore, Stockton, Modesto, Sonoma, and Capitola. These clinics provide primary and selected specialty care. The Health Care System is affiliated with Stanford School of Medicine, and the Pharmacy Service has affiliation agreements with the University of the Pacific (UOP), University of Southern California (USC), and Touro University Schools of Pharmacy.

### PHARMACY SERVICES

The Pharmacy Service provides 24-hour coverage seven days a week. Patient care is provided by a staff of more than 130 pharmacists, residents, students, and technicians practicing in the inpatient and ambulatory care setting. The pharmacy also provides a Pharmacoeconomics Center, and staff to participate on an array of local, regional, and national committees.

**Inpatient Service.** The decentralized inpatient pharmacy staff provides pharmaceutical care to veterans ensuring patients are educated and drug therapy is monitored. Care plans are developed based on individual patient needs and used in conjunction with computer-generated databases to monitor for drug indication, appropriateness, and achievement of therapeutic outcomes. New orders are evaluated in the context of this information with attention to drug dosing, drug interactions, adverse effects and drug allergies. Pharmacists' recommendations are communicated on patient care rounds or directly to the medical, surgical, psychiatric, or extended care teams, and documented in

electronic progress notes. The pharmacy also provides "code blue" and "e-team" coverage and staff to monitor total parenteral nutrition patients. Internal Medicine patients are counseled prior to discharge on all medications by a clinical pharmacist. Drug distribution is accomplished through highly automated, centralized unit dose and USP 797 Compliant, state of the art IV admixture services. By utilizing automation and the technician support staff efficiently in the dispensing functions of the pharmacy, the system provides an opportunity for pharmacists to provide pharmaceutical care to their patients.

**Ambulatory Care.** The Outpatient Pharmacy and Ambulatory Care Sections of the Pharmacy Service provide comprehensive pharmaceutical services for clinic patients, which include primary care management of patients in the General Medicine, Anticoagulation, and Home Based Primary Care (HBPC) Clinics. Our clinical pharmacy coverage includes our Mental Health and HIV Clinics and utilizes innovative telehealth strategies to provide care to patients at remote locations. In 2011, ambulatory care clinical pharmacists began the transition to Patient Aligned Care Teams (PACT), the VA's patient centered medical home model of ambulatory care.

**Education and Training.** Members of the pharmacy staff precept residents and Advanced Pharmacy Practice Experience students. Resident inservices, Journal Club, clerkship student therapeutics and case conferences add to the educational development of the pharmacy staff, residents and students.



## **Mission Statement**

*Upon completion of this residency, the pharmacist will be competent and confident in the provision of direct patient care in a wide spectrum of patient care environments. The pharmacist will be an effective, integral team member as well as efficient at independently solving problems. She/he will demonstrate excellent communication skills, develop clinical precepting skills and be a leader in the education of patients, health care providers and trainees. Leadership skills will be developed through the management of projects and working with administrators of the Pharmacy Service. Essential research skills will be developed and applied to pharmacy practices. Through all of these activities, the pharmacist will effectively utilize a variety of information and automation technologies.*

## **RESIDENCY ACTIVITIES**

The residency is a one-year postgraduate program that provides training and experience in Pharmacy Practice and Education. Patient care responsibilities are foremost; residents also receive instruction and experience in management, managed care, and research. Residents are provided with ample opportunities to teach in clinical clerkship and didactic settings. A residency project is required and a focus on economics, outcomes analysis, or health-care policy is encouraged.

### **Required Rotations: Residents may be required to do their rotations at practice sites throughout the entire Health Care System**

**Ambulatory Care (hybrid):** Residents will be assigned to a Patient Aligned Care Teams (PACTs) and be responsible for managing patients with diabetes, hypertension and hyperlipidemia during the longitudinal portion of this rotation (half-day clinic per week, all year long). In addition, to give residents experience in Anticoagulation Clinic, Home Based Primary Care and other assigned specialty clinics (which may include HIV, ESA, Pain, Women's Health clinics), residents will participate in a 7-week rotation in Ambulatory Care. Outpatient Pharmacy experience includes up to 8 hours per week providing direct patient care. Teaching opportunities include precepting pharmacy students and providing education to patients, caregivers, and staff.

**Critical Care (6 days/week, 6 weeks):** Residents participate as active members of an interdisciplinary intensive care team consisting of medicine, surgery and anesthesia physicians, an ICU pharmacist, and a clinical dietician. The patient population consists of both surgical (cardiovascular, general, vascular, neurologic) and medical (cardiology and pulmonary) patients. Learning is focused on hemodynamic monitoring, infectious diseases, fluid and electrolyte balance, acid-base disorders, total parenteral nutrition, and ICU pharmacoconomics. Residents on this rotation participate on Code Blue and eTeam events.

**Drug Information (6 weeks):** Residents are responsible for answering health-system drug information requests, and are assigned various projects to complete during the rotation. Examples of projects include writing and editing drug use criteria, conducting medication use evaluations, writing medical center health care policy, and participating in journal club. Residents provide pharmaceutical information and economic analyses for the Medication Management Committee.

**Geriatrics (year long):** Residents are responsible for performing monthly medication reviews, optimize medication regimens, and communicate recommendations to providers for skilled nursing and geriatric patients throughout the residency year.

**Internal Medicine (6 days/week, 6 weeks):** Pharmacy residents provide the patient care team with drug information and patient-specific medication recommendations with the goal of improving patient outcomes. Other activities include participating in work and attending rounds, monitoring patient medication therapy, reporting adverse drug reactions, pharmacokinetic monitoring, medication reconciliation, order verification and performing patient counseling. Teaching opportunities include giving in-services to health care staff and precepting pharmacy students.

**Managing Pharmaceutical Care: Projects and Conference (year long):** Residents, preceptors, and guest lecturers discuss on a weekly basis various aspects of the changing health care and pharmaceutical care delivery environment. Topics include: pharmaceutical care, disease management, management responsibilities, biostatistics in outcome measurements, and pharmacoconomics. Residents also explore the pharmacist's role in the development of health care policy by serving as an active member of a health care committee throughout the entire year. Committees include: Local P&T Committee, Regional Clinical Pharmacy Practice Council, Veterans Health Education Committee, Anticoagulation Oversight Team, and the Residency Committee.

**Service:** Residents develop familiarity with order verification and distributive functions throughout the Health Care System. During the Ambulatory Care rotation, up to 8 hours per week will be spent in the Outpatient Pharmacy. In addition, each resident will have a concentrated rotation (2 weeks) learning Inpatient Pharmacy operations. Inpatient order verification is integrated into each inpatient clinical rotation. Finally, residents will spend approximately 16 weekend days throughout the year in the Outpatient Pharmacy verifying and checking discharge orders, and educating patients being discharged from the hospital.

### **Example Elective Rotations (16 weeks, divided into 4-6 rotations)**

**Ambulatory Care:** Additional experience in the ambulatory care clinic setting is provided on this rotation.

**Emergency Room:** The pharmacy resident on the emergency medicine rotation plays an active role in managing patients admitted to the Emergency Department (ED) and Observation Unit (EDOU). In addition to providing team members with drug information and patient-specific medication recommendations, the resident will also participate in patient medication therapy monitoring, medication reconciliation, discharge counseling and assisting the clinical pharmacy specialist when responding to emergencies.

**Infectious Disease (6 weeks recommended):** Residents are active members of the infectious disease consult team and are primarily responsible for evaluating patient medication therapy, pharmacokinetic monitoring, recommending patient specific drug regimens and participating in weekly hospital antibiotic surveillance. Residents attend ID grand rounds presentations, precept pharmacy students, and provide drug information to the health care staff.

**Intravenous Admixture (3 weeks recommended):** Residents gain experience in our USP 797-compliant IV Room with sterile technique, assessing and compounding TPN orders, verifying chemotherapy orders, verifying IV orders, checking their work and the work of pharmacy technicians, and manage workflow.

**Pain Management:** Residents evaluate and provide recommendations for pharmacologic and non-pharmacologic treatment regimens in the management of chronic non-cancer pain. Activities include conducting Pain Clinic assessments for treatment efficacy and adverse effects, interpreting results of urine drug screens, evaluating non-formulary drug requests and Pain e-consults, and providing education to patients and staff.

**Polytrauma Rehabilitation:** Residents take an active role in the management of patients admitted to the Spinal Cord Injury and Polytrauma services. Activities include participating in daily rounds, monitoring patient medication therapy, reporting adverse drug reactions, pharmacokinetic analyses, and fielding drug information questions. Teaching opportunities include pharmacy student precepting, discharge medication education and medication in-services to healthcare staff.

**Psychiatry (Inpatient or Outpatient):** These rotations provide the resident with a basic understanding of psychiatric disease states and pharmacotherapy as they relate to the clinical management of Veterans with mental health disorders.

**Research (up to 4 weeks):** Residents may spend a block of time, and/or opt to use up to 5 "floating days" devoted to their residency project.

**Off-Site Electives:** One elective rotation off-site is available for residents. Residents work with off-site preceptors and the Residency Program Director to develop rotation objectives.

## Benefits

ACLS Certification	Vacation - 13 days / year
Health & Dental Insurance	Sick leave - 13 days / year
Paid educational leave*	All federal holidays off
Free Parking	Lab Coats

\*Residents are paid for their time to attend meetings. Funding to support travel and meeting registration is limited.

### 2015-2016 Residency Class

Caroline Ha, PharmD (UOP)	Linda Nguyen, PharmD (UCSF)
Amy Hassenberg, PharmD (UCSF)	Alexandra Reynolds, PharmD (UCSF)
Katie Nguyen, PharmD (Touro)	Aashish Surti, PharmD (UCSF)
Tu-Anh Vo, PharmD (UCSF)	

## RESIDENT RESEARCH PUBLICATIONS

A major focus of our program is to enhance the ability of the resident to apply scientific research methods to complete an evaluative project. Projects are selected by the resident and are conducted under the guidance of research preceptors. Past residents' research projects have resulted in many valuable contributions to the medical literature. The following is a sampling:

1. Lee P, Han SY, Miyahara RK. Adherence and Outcomes of Patients Treated with Dabigatran: Pharmacist-managed Anticoagulation Clinic versus Usual Care. *Am J Health Syst Pharm* July 1, 2013 70:1154-1161
2. Yiu P, Nguyen NN, Holodniy M. Clinically Significant Drug Interactions in Younger and Older Human Immunodeficiency Virus-Positive Patients Receiving Antiretroviral Therapy. *Pharmacotherapy* 2011;31(5):480-489.
3. Wu PC, Lang C, Hasson NK, Linder SH, Clark DJ. Opioid Use in Young Veterans. *J Opioid Manag* 2010 Mar-Apr;6(2):133-9.
4. Hernández B, Hasson NK, Cheung R. Hepatitis C Performance Measure on Hepatitis A and B Vaccination: Missed Opportunities? *Am J Gastroenterol* 2009;104(8):1961-7.
5. Mathews S, Cole J, Ryono R. Anticoagulation-related outcomes in patients receiving warfarin after starting levofloxacin or gatifloxacin. *Pharmacotherapy* 2006;26(10):1446-51.
6. Khorashadi S, Hasson NK, Cheung RC. Incidence of statin hepatotoxicity in patients with hepatitis C. *Clin Gastroenterol Hepatol* 2006;4:902-7.
7. Yee JL, Hasson NK, Schreiber DH. Drug-related emergency department visits in an elderly population. *Annals of Pharmacother.* 2005; 39(12): 1990-5.
8. Gee MT, Hasson NK, Hahn T, Ryono RA. Outcomes of a tablet splitting program in patients taking HMG-CoA Reductase Inhibitors. *J Managed Care Pharm* 2002;8(6):353-9.
9. Faltermier AM, Hasson NK, Cox D, Lum BL. The impact of a telephone care pharmacy program on health care resource utilization. *JMCP* 2000;6(3):217-21.
10. Puentes E, Puzantian T, Lum BL. Prediction of valproate serum concentrations in adult psychiatric patients using bayesian model estimations with NP2M population pharmacokinetic parameters. *Ther Drug Mon* 1999;21:351-4.
11. Gong C, Hasson NK, Lum BL. Impact of a diabetes disease management clinic on the total glycosylated hemoglobin of patients with type 2 diabetes mellitus. *JMCP* 1999;5(6):511-5.
12. Mole L, Ockrim K, Holodniy M. Decreased medical expenditures for care of HIV-seropositive patients: The impact of highly active antiretroviral therapy at a US Veterans Affairs Medical Center. *Pharmacoecon* 1999;16(3):307-15.d
13. Nguyen DP, Hasson NK. Perioperative management of patients on long-term warfarin therapy. *Hosp Pharm* 1999;34(1):103-7.

## Postgraduate Year One (PGY1) Pharmacy Residency

### How to apply:

Our program participates in the ASHP PhORCAS system and National Matching Service (NMS Number: 191213) and follows the rules associated with these processes. This residency site agrees that no person at this site will solicit, accept, or use any ranking-related information from any residency applicant.

### Our eligibility requirements are:

Prior to match:

1. Applicants must be a US Citizen.

After match:

1. Return signed Resident Appointment Letter by the stated deadline.
2. Successfully pass a pre-employment physical exam.
3. Pharmacist licensure in at least one state must be secured within 3 months of starting the residency.

Candidates wishing to apply to our program are required to submit the following **via PhORCAS**:

1. A "letter of intent" stating why you are pursuing a residency position in our program (max. 1 page).
2. A current curriculum vitae.
3. A VA Form 10-2850D "Application for Health Professions Trainees" **AND** US Government form OF-306 "Declaration for Federal Employment". These forms are available at <http://www.va.gov/oaa/app-forms.asp>.
4. A current official School of Pharmacy transcript.
5. Three evaluations from references.

**Applications must be completed in PhORCAS no later than January 1, 2016.** Applications completed after January 1, 2016 will not be reviewed. Incomplete applications are not reviewed. The program will advise applicants with completed applications of their interview status (e.g., invite for interview or no interview) by February 20.

For more information:

Randell K. Miyahara, Pharm.D.

Clinical Coordinator, PGY1 Pharmacy Residency Program Director

VA Palo Alto Health Care System, Pharmacy Service (119), 3801 Miranda Avenue, Palo Alto, CA 94304

[randell.miyahara@va.gov](mailto:randell.miyahara@va.gov)

(650) 493-5000, ext. 67303 FAX: (650) 852-3444

[http://www.paloalto.va.gov/services/pharmacy/Pharm\\_Residency.asp](http://www.paloalto.va.gov/services/pharmacy/Pharm_Residency.asp)