



PHARMACY RESIDENCY OPPORTUNITIES



EXPERIENCE

some of the most advanced
pharmacy practice models in
the United States

THE UNIVERSITY OF NEW MEXICO HEALTH SCIENCES CENTER

PGY-1 Pharmacy Practice Residency

Specialized PGY-2 Residencies
in Ambulatory Care, Emergency
Medicine, Infectious Diseases,
Informatics, Oncology, Critical
Care, and Thrombosis and
Hemostasis

goto.unm.edu/pharmacyresidency



PHARMACY RESIDENCY OPPORTUNITIES



contents

| | |
|---|----|
| UNM Pharmacy Residency Experience | 1 |
| Advanced Pharmacy Practice in New Mexico | 2 |
| Life in the Land of Enchantment | 3 |
| Exceptional Training, Superior Care | 4 |
| UNM Pharmacy Residency History | 5 |
| Benefits of and Requirements for Admission | 5 |
| PGY1 Pharmacy Residency | 6 |
| Ambulatory Care PGY2 Pharmacy Residency | 8 |
| Emergency Medicine PGY2 Pharmacy Residency | 10 |
| Infectious Diseases PGY2 Pharmacy Residency | 12 |
| Informatics PGY2 Pharmacy Residency | 14 |
| Oncology PGY2 Pharmacy Residency | 16 |
| Critical Care PGY2 Pharmacy Residency | 18 |
| Thrombosis & Hemostasis PGY2 Pharmacy Residency | 20 |



PGY-1 and PGY-2 Pharmacy Residencies at the University of New Mexico Health Sciences Center are accredited through the American Society of Health System Pharmacists (ASHP)

The UNM Pharmacy Residency Experience

Post-graduate pharmacy residency training at The University of New Mexico (UNM) Health Sciences Center cultivates future leaders in the pharmaceutical care profession through experiences that further advance the resident’s knowledge, confidence, leadership skills and understanding of how a healthcare system functions.

Through a close and enduring collaboration between the UNM College of Pharmacy and the UNM Hospitals Department of Pharmacy, pharmacy residency experiences at UNM are unique in comparison to most other programs.

We provide our residents the opportunity to interact with one of the most diverse patient populations in the nation while practicing within an award-winning interdisciplinary healthcare setting.

Additionally, UNM pharmacy residents have direct access to the knowledge and experience of nationally and internationally recognized practitioners - all within state-of-the-art facilities, situated in one of the most geographically beautiful and culturally diverse regions of the nation.



Advancing Pharmacy Practice in New Mexico and Beyond

For three quarters of a century, UNM Health Sciences faculty in partnership with New Mexico’s pharmacy profession have continually forged new roles for pharmacists and new models of care.

New Mexico is the first state to recognize and license advanced practice pharmacists (pharmacist clinicians) who provide direct care to patients. Pharmacist clinicians conduct medication reviews and physical assessments, order lab and diagnostic tests, and prescribe medication therapies.

New Mexico’s pharmacists can prescribe, dispense and administer a variety of Board-approved medications such as childhood and adult vaccinations, hormonal and emergency contraceptives, naloxone, smoking cessation agents, and travel medicines.

As part of an academic health sciences center, interprofessional educational experiences flourish at UNM, providing our residents with vital training alongside medical, nursing, and other health professionals and preparing them to take their place as a critical part of a comprehensive health care team.

In 2020 New Mexico added pay parity legislation to the already progressive pharmacy practice laws. Now state insurance plans (including Medicaid and private insurance) are required to compensate pharmacist clinicians or pharmacists with prescriptive authority at an equivalent rate to other providers.

Life in the Land of Enchantment

Albuquerque, the state’s largest city, basks in 310 days of sunshine, combined with a mild, dry climate and four distinct seasons. Very low humidity means that even when the temperatures rise, summer is always comfortable, and our sunny winters are comparatively mild.

The University of New Mexico campus comprises a small “city within a city” nestled at the base of the majestic sandia mountains.

Daily walks throughout the year provide you with mini snapshots of New Mexican beauty - electric colors

of blooming cacti and wildflowers in the spring, roadrunners darting to and fro in the summer, hot air balloons overhead in the autumn, luminarias lighting your path in the winter - all set against the backdrop of award-winning southwest architecture and beneath the canopy of awe-inspiring big blue skies.

From the breathtaking views, to resilient and diverse people, to delicious chile-infused cuisine, New Mexico provides opportunities for constant amazement within a place and culture like no other.

The state provides endless natural sources of wonder and adventure; spanning the dramatic northern mountains to the stark beauty of open spaces like our eastern high plains and southern deserts.

Our special blend of cultures - Native American, Hispanic, Western and more - come together to create a wonderful and vibrant mix of art, music and food found nowhere else on earth.



Exceptional Training. Superior Care.

UNM HOSPITAL

As one of a select few U.S. institutions that serve simultaneously as an academic medical center, level I trauma center and county hospital, and also the regional referral center for many specialties, UNMH offers a training site with a large diversity of clinical experiences while caring for underserved populations.

UNMH, a 619-bed acute tertiary care facility providing state-of-the-art patient care, provides a comprehensive stroke and neuro trauma service, a pediatric cardiothoracic surgery program, and adult and pediatric comprehensive psychiatry services.

The hospital has 72 adult ICU beds (split between medical ICU, neurosurgical ICU, and trauma surgical ICU) and 90 emergency room beds, which annually manage more than 93,000 emergency visits, 7,000 trauma cases, and 18,000 surgeries.

UNM CHILDREN'S HOSPITAL

UNM Children's Hospital is the state's largest pediatric hospital providing comprehensive services including New Mexico's only pediatric level 1 trauma center and level IV NICU. The children's

hospital also has a pediatric ICU and a pediatric rehabilitation facility.

UNM COMPREHENSIVE CANCER CENTER

An NCI-designated cancer center, the UNM Comprehensive Cancer Center annually manages more than 10,000 patient visits, 13,900 prescriptions, 15,800 radiation treatments and 38,900 infusions. In 2016, the cancer center started an autologous BMT program with the hope for expansion to others.

OUTPATIENT LEARNING OPPORTUNITIES

With nearly 500,000 outpatient visits completed in 90 outpatient clinics annually, the University of New Mexico Health Sciences Center (UNM HSC) provides ample opportunities for pharmacists to have a significant impact on the lives of New Mexicans.

One of the many outstanding examples of a medical home in which pharmacists serve as healthcare providers is in the UNM Truman Health Services Clinic, serving the medical needs of over 1,200 people living with or at risk of HIV or Hepatitis C. The Truman clinic also offers one of the

few opportunities nationwide to train in an interdisciplinary setting providing care to transgender individuals.

Due to New Mexico's large geographic area and relatively few specialists outside of Albuquerque, Project ECHO® (ExTension for Community Healthcare Outcomes) was originally designed for the treatment of Hepatitis C across vast distances. The ECHO™ model utilizes a "hub and spoke model," teleconferencing subject matter experts (often times including UNM residency preceptors) and local community providers. This provider-to-provider teleECHO™ model disseminates knowledge and maximizes the capacity of the healthcare system. Project ECHO currently hosts 220 hubs for more than 100 diseases and conditions in 31 countries.



History of Pharmacy Residency Programs at UNM

The University of New Mexico Health Sciences Center established its first pharmacy residency in 2000 - the PGY2 Residency in Infectious Disease.

Since that time, we have continued to expand post graduate pharmacy residency opportunities with the PGY1 program in 2003, and additional PGY2 specialized programs in ambulatory care (2012), emergency medicine (2015), oncology (2016), pediatrics (2019) and informatics (2020).

Over 100 PGY1s and PGY2 pharmacist have successfully completed residencies at UNMH. Roughly 70% of PGY1 graduates have pursued additional training through either board certification and/or PGY2 residencies.

Graduates from UNM residency programs have gone on to careers in a multitude of specialties including academia, clinical pharmacy, pharmacy informatics and industry and have published hundreds of peer reviewed articles.

Benefits of and Requirements for Admission

BENEFITS

- Competitive salary (Please see our listings in the ASHP residency directory for the most recent salary)
- Vacation: 10 days
- Professional Leave: up to 10 working days
- Holidays: up to 9 days
- Health Insurance
- Attend two conferences including ASHP Midyear Clinical Meeting

ADMISSION REQUIREMENTS

- Doctor of Pharmacy degree from an accredited school or college of pharmacy required prior to beginning of residency
- Be eligible for New Mexico pharmacist licensure
- **Additional PGY2 Requirement:** completion of a PGY1 residency

APPLICATION INFORMATION

- Apply online using ASHP PhORCAS:
 - Letter of intent stating interests and goals
 - Curriculum vitae
 - College of pharmacy transcripts
 - Three recommendations from healthcare professionals who can attest to your practice abilities, preferred a preceptor who can speak to clinical experience on a rotation.
- An on-site interview is required
- **Application deadline:** Application deadline is **early January** annually (please see our listing in the ASHP residency directory for details)



Post Graduate Year 1 PGY1 Pharmacy Residency Program

Recent Publications

Carrillo AR, Elwood K, Werth C, Mitchell J, Sarangarm P. Balanced Crystalloid Versus Normal Saline as Resuscitative Fluid in Diabetic Ketoacidosis. Ann Pharmacother. 2022 Sep;56(9):998-1006. doi: 10.1177/10600280211063651. Epub 2022 Jan 6. PMID: 34986659.

Meador S, Dyke S, Togami J, Kuskov B, Burnett AE. Antithrombosis stewardship efforts to de-escalate inappropriate combined therapy in outpatient clinics [published online ahead of print, 2021 Aug 19]. J Thromb Thrombolysis. 2021;10.1007/s11239-021-02551-y. doi:10.1007/s11239-021-02551-y

Pham NT, **Yon CM**, Anderson JR, et al. Awareness and perceptions of advanced practice pharmacists among health care providers in New Mexico. J Am Pharm Assoc (2003). 2021;61(1):101-108. doi:10.1016/j.japh.2020.10.001

Tencza E, Harrell AJ, Sarangarm P. Effect of tranexamic acid administration time on blood product use in urban trauma patients. Am J Health Syst Pharm. 2020 May 19;77(Supplement_2):S46-S53.

Patel A, Dodd MA, D'Angio R, Hellinga R, Ahmed A, Vanderwoude M, Sarangarm P. Impact of discharge medication bedside delivery service on hospital reutilization. Am J Health Syst Pharm. 2019 Nov 13;76(23):1951-1957.

Contact Information

Lisa M. Anselmo PharmD, BCOP
Director of Clinical Pharmacy
PGY1 Residency Director

UNM Hospitals Pharmacy Administration 2211 Lomas Blvd NE
Albuquerque NM 87106

Email lmanselmo@salud.unm.edu
phone 505.272.2034

fax 505.272.2037

goto.unm.edu/pharmacyresidency



“UNM Hospital and College of Pharmacy allowed me the opportunity to have a wide array of experiences. I was able to practice in 8 different clinical areas of the hospital, teach a section of therapeutics to students, mentor students on rotation, and conduct my own research. UNM has some of the highest quality and smartest clinical pharmacists anywhere, and they are highly respected not only within the hospital but in the US healthcare community. It is their reputation which opened doors for me to function as an equal member of the medical teams. They will put in extraordinary effort to make you feel at home, no matter where you're coming from.”

Joe Llewellyn, PharmD
PGY-1 Resident 2013-2014
Senior Director Clinical Research
Gilead Sciences

The PGY1 residency program is designed to provide the resident with training and experience in various areas of clinical practice, research, and teaching. The program maintains a close association with the University of New Mexico College of Pharmacy and thus is able to provide a unique one-year residency that can be tailored to meet the interests of each resident. Our program allows for seven PGY-1 residents and two non-traditional PGY-1 residents.

Residency Rotations

a combination of longitudinal and/or 4 week experiences

Required 4-week Rotations

- Orientation
- Research
- Internal Medicine
- Critical Care (ICU or Emergency Medicine)
- Pediatrics
- Internal Medicine Precepting
- Pharmacy Administration

Required Longitudinal Rotations (11 months)

- Specialty longitudinal experience
- Research
- Staffing
- Teaching

Possible Elective Rotations

- Academia
- Ambulatory Care (several options)
- Anticoagulation
- Cardiology
- Geriatrics
- Hematology/Oncology (outpatient or inpatient)
- Hepatology/ECHO
- Infectious Disease (stewardship or inpatient consult service)
- Informatics
- Nephrology
- Renal Transplant
- Toxicology
- Psychiatry
- Maternal/fetal Medicine
- HIV
- Neurology
- PICU/HemeOnc

Additional Residency Experiences

- Staffing once every 4 weeks & one 4 hour evening shift per week (required)
- Didactic Lectures at the College of Pharmacy (one lecture required)
- Teaching Certificate Program (required)
- ACLS/BLS Certification (required)
- Physical Assessment Certificate Program (optional - for pharmacist clinician licensure)



Ambulatory Care PGY2 Pharmacy Residency Program

A collaboration between the University of New Mexico College of Pharmacy and our colleagues across the UNM Health Sciences Center results in an extraordinary 12-month ambulatory care experience. Our residents train with certified pharmacist clinicians who practice with prescriptive authority. This is one of the most advanced pharmacy practice models in the country, in which the resident earns patient contact hours toward a NM pharmacist clinician license.

Required 4-week Rotations

- 3 months of Diabetes and Cardiovascular Risk Reduction
- 1 month primary care in HIV & transgender health
- 1 month research

Required Longitudinal Rotations

- Diabetes/CV Risk Reduction Clinic, one ½-day per week
- Participation in Endocrinology teleECHO™ Clinic
- Teaching/Academia Experience
- Administration
- Research

Possible Elective Rotations

- Academia
- Pain management
- Nephrology
- Heart Failure
- Anticoagulation
- Geriatrics
- Pediatric Pulmonary
- Transplant Clinic
- Diabetes in CKD population
- Psychiatry
- Required rotations can be repeated as electives
- Opportunity for new elective development

Additional Residency Experiences

- Didactic Lectures
- Patient Care Lab Instruction
- Teaching Certificate Program
- Experiential Education
- Personal & Professional devt. programs

Recent Publications

Bermudez SR, Anderson JR, Bos AJ, Ray GM. Utilization rates and predictors of sodium glucose co transporter 2 inhibitor use in patients with heart failure with or without type 2 diabetes. AJHP. 2023;80:1787-95

Pham NYT, Yon CM, Anderson JR, Dodd MA, Roberts MH, Yang SM, Ray GM. Awareness and perceptions of advanced practice pharmacists among health care providers in New Mexico. JAPhA. 2021;61(1):101-108

Gallegos Aragon K, Elmaoued AA, **Pham NT,** Conklin JR, Ray GM. Long-Acting Basal Insulins: A Review of the More Recently Approved Agents. Cardiol Rev. 2019;27(5):260-266. doi:10.1097/CRD.0000000000000266

Anderson JR, **Gonzales LJ,** Sarangarm P, Marshik P, Hunter TS, Duran NL, Ray GM. Awareness, perceptions, and attitudes toward community pharmacist clinical services: An analysis of data from 2004 and 2018. JAPhA. 2022;62(1364-68)

Newsome C, Mallawaarachchi I, Conklin J, Ray G. Health literacy of student pharmacists. Curr Pharm Teach Learn. 2018;10(3):340-343. doi:10.1016/j.cptl.2017.11.005

Contact Information

Gretchen M. Ray, PharmD, PhC, BCACP, CDCES Associate Professor, Dept of Pharmacy Practice & Administrative Sciences

UNM College of Pharmacy
MSC09 5360 | 1 University of New Mexico
Albuquerque NM 87131

Email gray@salud.unm.edu
phone 505.272.8308

fax 505.272.4721

goto.unm.edu/pharmacyresidency



“I have had a memorable and unique experience at UNM. This is a program that provides you with the opportunity to practice at the top of your license within an underserved community. With its great array of rotations, you are able to tailor your learning experiences based on your passions with an advanced scope of practice. The Land of Enchantment also has a diverse population that provides the opportunity to grow in providing culturally competent care. This program also provides mentorship from preceptors that are highly respected experts and advocates within their field. They not only support you but encourage you to explore this hidden gem of a city through hiking the Sandia Mountains or capturing the magic of surrounding national parks. The warm and vibrant New Mexican culture definitely leaves you feeling right at home.”

Sarah Bermudez, PharmD, PhC, RDN
UNM PGY-1 Resident 2020-21, UNM PGY-2 Amb Care Resident 21-22
Clinical Pharmacy Specialist, Endocrinology
University Health System, San Antonio, TX



Emergency Medicine PGY2 Pharmacy Residency Program

Train in a fast-paced immersive environment. The Emergency Medicine Residency at the University of New Mexico Hospital offers a cutting edge clinical practice in the region’s only Level-1 Trauma Center. The Emergency Department at the University of New Mexico Hospital cares for over 90,000 adult and pediatric patients per year and is also the primary academic medical center and county hospital. Pharmacy provides 24-7 bedside pharmaceutical care in the Emergency Department and maintains a strong relationship with the Department of Emergency Medicine which affords the resident the opportunity to train in a unique multidisciplinary environment.

Residency Rotations

| Required Blocks | Required Longitudinal Rotations | Additional Residency Experiences |
|--|---|---|
| <ul style="list-style-type: none">• Orientation• Emergency Medicine (five months)• Emergency Medicine Precepting• Medical Intensive Care Unit• Pediatric Intensive Care Unit• ICU Swing (MICU, TSI, and NSI coverage)• Stewardship (Antithrombosis/Antimicrobial)• Toxicology | <ul style="list-style-type: none">• Pediatric Emergency Medicine• Emergency Response/Disaster Management• Research (research project with a publication-ready manuscript)• Teaching• Administration | <ul style="list-style-type: none">• Staffing every 3 weeks in a critical care area (either ED or ICU)• Didactic lectures at the College of Pharmacy• Teaching Certificate Program (optional)• ACLS/BLS/PALS Certification (required)• Ride along experiences with ambulance services, including fixed wing, and EMS consortium• Statistics for Pharmacy Residents (optional) |

Recent Publications

Brown CS, Sarangarm P, Faine B, et al. A Year ReviewED: Top Emergency Medicine Pharmacotherapy Articles of 2021. Am J Emerg Med. 2022 Jul 25;60:88-95.

Sarangarm P, Huerena TA, Norii T, Walraven CJ. Antibiotic Prescribing in Adults Presenting with Pharyngitis Pre- and Post-Implementation of a Rapid Group A Streptococcus Test. Hosp Pharm. 2022 Apr;57(2):309-314.

Iovine JA, Villanueva RD, Werth CM, Hlavacek NL, Rollstin AD, Tawil I, Sarangarm P. Contemporary Hemodynamic Management of Acute Spinal Cord Injuries with Intravenous and Enteral Vasoactive Agents: A Narrative Review. Am J Health Syst Pharm. 2022 Sep 7;79(18):1521-1530.

Fletcher ML, Sarangarm P, Smolinske S, Nash J, Alunday RL, Seifert SA, Warrick B. A Systematic Review of Second line Therapies in Toxic Seizures. Clin Toxicol (Phila). 2021;59(6):451-56.

Tenzca E, Sarangarm P, Harrell A. Effect of Tranexamic Acid Administration time on Blood Product use in Urban Trauma Patients. Am J Health Syst Pharm. 2020 May 19;77(Supplement_2):S46-S53.

Fletcher M, Rankin S, Sarangarm P. The Effect of Pharmacy-Driven Education on the Amount of Appropriately Administered Tetanus Vaccines in the Emergency Department. Hosp Pharm. 2019 Feb;54(1):45-50.

Astrup G, Sarangarm P, Burnett A. Fixed dose 4-factor prothrombin complex concentrate for the emergent reversal of warfarin: a retrospective analysis. J Thromb Thrombolysis. 2018 Feb;45(2):300-305.

Contact Information

Preeyaporn Sarangarm, PharmD, BCPS, BCCCP Emergency Medicine PGY2 Program Director

UNM Hospitals Pharmacy Administration
2211 Lomas Blvd NE
Albuquerque NM 87106

Email psarangarm@salud.unm.edu
phone 505.925.7911
fax 505.272.2037

goto.unm.edu/pharmacyresidency



“The residency program at UNMH provides a dynamic learning experience with an ideal balance of mentorship and challenging opportunities to advance professional growth. I was fully prepared to enter my career as an Emergency Medicine Pharmacist and am thankful to have trained with such knowledgeable, engaging colleagues.”

Kyle DeWitt, PharmD, BCPS
PGY-2 Resident 2014 -2015
Pharmacist Specialist, Emergency Medicine
Residency Program Director, Emergency Medicine
University of Vermont Medical Center, Burlington, VT



Infectious Diseases PGY2 Pharmacy Residency Program

Interact with some of the most diverse patient populations in the nation while training with Infectious Disease providers in an interdisciplinary health care setting. UNMH provides acute medical care for patients from New Mexico, Arizona, Colorado, and Texas. New Mexico is endemic for unique pathogens, including Hanta virus, plague, and Coccidioidomycoses. The Infectious Disease Residency at University of New Mexico Hospital is tailored to give a residents exposure to all aspects of the management of patients with infectious diseases.

Residency Rotations

a combination of longitudinal and/or 4 week experiences

Required 4-week Rotations

- Orientation
- Adult Infectious Diseases (x2)
- Advanced Adult ID
- Clinical Microbiology
- Pediatric Infectious Diseases
- Antimicrobial Stewardship
- Infectious Diseases Outpatient Clinics

Longitudinal Rotations

- Research (research project with a publication-ready manuscript)*
- Residency Activities
- Teaching
- HIV Clinic or OPAT Clinic (1/2 day per week)
- Clinical Microbiology

**Longitudinal in addition to a 4 week rotation*

Elective Rotations

- Academic Pharmacy & Pedagogy
- Adult Hematology Malignancies & Stem Cell Transplant
- Outpatient HIV Treatment & Prevention
- Pediatric Infectious Diseases
- Transplant

Additional Residency Experiences

- Clinical staffing in Antimicrobial Stewardship (every 3 weeks) and one major holiday (Thanksgiving/Day after Thanksgiving, Christmas Eve/Christmas Day, or New Year's Eve/New Years Day) or two minor holidays
- Volunteer faculty appointment at the UNM College of Pharmacy for didactic lectures and student precepting
- Didactic Lectures at the College of Pharmacy
- Physical Assessment Certificate Program (for pharmacist clinician licensure)

Recent Publications

Gilliam D, Acosta D, Carvour ML, Walraven C. Retrospective review of intermittent and continuous infusion vancomycin for methicillin-resistant Staphylococcus aureus bacteremia. Eur J Clin Pharmacol. 2023

Ruan H, Ryan K, Sosa N, Walraven C. Missed Opportunities: Intravenous vs Oral Antibiotic De-escalation for Treatment of Lower Extremity Osteoarticular Infections. J Clin Pharmacol. 2023 DOI: 10.1002/jcph.2342.

Benning M, Acosta D, Sarangarm P, Walraven C. Revisiting β -lactams for treatment of urinary tract infections: assessing clinical outcomes of twice daily cephalexin for empiric treatment of uncomplicated UTIs. J Clin Pharmacol. 2022. DOI: 10.1002/jcph.2179.

Ramos-Otero G, Sarangarm P, Walraven, C. A retrospective analysis of intravenous versus oral antibiotic step-down therapy for the treatment of uncomplicated Streptococcal bloodstream infections. J Clin Pharmacol. 2022. DOI: 10.1002/jcph.2097.

Custodio M, Sanchez D, Anderson B, Ryan K, Walraven C, Mercier R-C. Emergence of resistance in Klebsiella aerogenes to piperacillin-tazobactam and ceftriaxone. Antimicrob Agents Chemother. 2021; 65(2):e01038-20. DOI: 10.1128/AAC.01038-20.

Ryan KL, Jakeman B, Conklin J, Pineda LJ, Deming P, Mercier RC. Treatment of patients with HIV or hepatitis C by pharmacist clinicians in a patient-centered medical home. Am J Health Syst Pharm. 2019;76(11):821-828. doi:10.1093/ajhp/zxz059

Contact Information

Carla Walraven, PharmD, BCIDP
Infectious Disease PGY2 Residency Program Director,
UNM Hospitals

UNM Hospitals, Department of Pharmacy
2211 Lomas Blvd. NE
Albuquerque, NM 87106

Email cwalraven@salud.unm.edu
phone 505.272.4669

fax 505.272.2037

goto.unm.edu/pharmacyresidency



“I am grateful for the long lasting bonds I formed with my colleagues, the guidance I received from my mentors, and the supportive learning environment that UNMH fostered— one that allowed me to pursue my own unique journey. Now, as a faculty member, I cannot think of a better way to inspire future generations of pharmacy students. My mission is clear— to reflect the high-quality education I received at UNMH by providing valuable experiences that prepare students for the future of medicine.”

Gerardo P. Ramos-Otero PharmD
PGY2 Resident 2019-2020
Clinical Assistant Professor
Department of Pharmacy Practice
Nova Southeastern University, Puerto Rico Campus



Informatics PGY2 Pharmacy Residency Program

The Pharmacy Informatics resident will have the opportunity to work closely with the multidisciplinary teams providing informatics solutions for the University of New Mexico Health System. The resident will gain a foundation in Pharmacy Informatics that will enable them to work independently and lead projects for the health care system. Electives are offered to the resident in Physician, Nursing, Population Health, and Antimicrobial Stewardship Informatics to create a well-rounded understanding of health care informatics. By the completion of the program, the resident will achieve an ASHP Pharmacy Informatics Certificate.

Required 4-week Rotations

- Informatics Pharmacy Orientation (3 weeks)
- Pharmacy Informatics II
- Pharmacy Orders Integration
- Pharmacy Automation, Infusion Pump, & Dispensing Technology
- Data Analytics and Reporting
- Clinical Decision Support
- Clinical Decision Support II
- Medication Safety
- Information Technology Clinical Informatics

Longitudinal Rotations

- Project Management (6 months)
- Teaching (12 months)
- Research (12 months)
- Pharmacy Informatics (10 months)

Possible Elective Rotations

- Physician Health Care Informatics
- Nursing Informatics
- Antimicrobial Stewardship Informatics
- Population Health

Additional Residency Experiences

- Staffing one weekend a month in a clinical staffing area
- Volunteer faculty appointment at the UNM College of Pharmacy for didactic lectures and student precepting
- Statistics for Pharmacy Residents (optional)

Informatics Pharmacy Residents Will

- Utilize a Cerner-based electronic medical record to enhance the ordering experience for providers, maintain pharmacy formulary, and streamline pharmacy workflow.
- Provide suggestions and build solutions to pharmacist clinical workflow and documentation issues.
- Participate in hospital-wide initiatives that may include, but is not limited to, enhancements to pump utilization, barcode medication administration, communication channels, and packaging resources.
- Report on various processes to improve workflow, dispensing and charging of medications, and quality utilizing PowerInsight, Tableau, and data analytics tools.
- Participate in a multidisciplinary team involving clinical pharmacists, physicians, and nursing in addition to information technology and project managers.

Contact Information

Lucas McGrath, B.S., PharmD

PGY-2 Informatics Residency Director,
UNM Hospitals

UNM Hospitals Pharmacy Administration
2211 Lomas Blvd NE
Albuquerque, NM 87106

Email lkmcgrath@salud.unm.edu

phone 505.272.8227

fax 505.272.2037

goto.unm.edu/pharmacyresidency



“Post-graduate training in Pharmacy Informatics offers a crucial skillset as healthcare becomes increasingly digitized, and the market for pharmacists becomes progressively more competitive. The Pharmacy Informatics Residency at UNM Hospital will not only provide you with exceptional, individualized, clinical training at the state's premiere academic center, Level 1 Trauma Center and Children's Hospital, but will also teach you the leadership and technical skills to manage informatics initiatives at large health systems.”

Dusadee Sarangarm, MD
Chief Medical Information Officer
Associate Professor, Department of Emergency Medicine
University of New Mexico School of Medicine



Oncology PGY2 Pharmacy Residency Program

Recent Publications

Young MT, Anselmo L, Heideman N. Polypharmacy and potentially inappropriate medication use in multiple myeloma patients on lenalidomide at an academic medical center. Poster presentation HOPA annual meeting March 2020.

Hua J, Anselmo L, Heideman N. A retrospective study assessing incidence and prevalence of immune-related adverse events in rural state with ethnically diverse population. Poster presentation HOPA annual meeting March 2019.

Cadavid N, Anselmo L, Soares H. Observed treatment patterns in patients with hepatocellular carcinoma (HCC) initiated on systemic therapy at a comprehensive cancer center. Poster presentation HOPA annual meeting March 2018

Prior residents: Where are they now?

- Mary Young, Pharm.D. University of New Mexico Cancer Centre, Albuquerque
- Jessica Hua, Pharm.D, BCOP, Valley Medical Center, Seattle
- Natalia Cadavid, Pharm D. BCOP Orlando Health Cancer Center Institute, Orlando
- Stephanie Clark Pharm D., BCOP. Beth Israel Deaconess Medical Center, Boston
- Alexis Spence PharmD., Banner MD Anderson, Gilbert Arizona

Contact Information

Nancy Heideman PharmD, BCPS, BCOP
Oncology Residency Director
Oncology Clinical Pharmacy Lead

UNM Comprehensive Cancer Center
1201 Camino de Salud NE
Albuquerque, New Mexico 87102

Email nheideman@salud.unm.edu
phone 505.925.0241
fax 505.925.0122

goto.unm.edu/pharmacyresidency



“I chose to complete my PGY-2 oncology residency at the UNM Comprehensive Cancer Center because of the supportive learning environment, the well-rounded clinical training experiences, and the unique opportunity to serve a diverse patient population. I have felt welcomed by the team from day one at the residency information session. The preceptors are dedicated and invested in my personal and professional growth. It also has been a blessing to learn from providers who are enthusiastic about working with pharmacy.”

Eva Huang, PharmD
PGY-2 Resident 2022-2023
evhuang@salud.unm.edu

The UNM Health Sciences Center is proud to house a world-class oncology practice site at the UNM Comprehensive Cancer Center - one of only 47 cancer centers in the nation to be designated by the National Cancer Institute as a comprehensive cancer center, the highest federal designation and rating for cancer centers. UNM Comprehensive Cancer Center's team of doctors and cancer specialists work side-by-side to design individualized treatment plans and deliver them to our patients in a compassionate, culturally sensitive way.

Residency Rotations a combination of longitudinal and/or 4 week experiences

Required:

- Inpatient:
 - Orientation
 - Inpatient Hematology/Oncology
- Outpatient:
 - Outpatient Hematology
 - Stem Cell Transplant
 - Breast Cancer
 - Gynecological Cancer
 - Gastrointestinal Cancers/Sarcoma
 - Lung
 - Genitourinary Cancers
 - CNS/Head & Neck/Melanoma

Electives:

- Pediatric Oncology
- Survivorship
- Advanced Practice (Capstone) Rotation

Longitudinal Rotation

- Administration
- Research
- Teaching
- Infusion Pharmacy Staffing
- Investigational Drug Services (1 week block)

Additional Residency Experiences

- Staffing one weekend a month on the hematology/oncology unit of the hospital
- Volunteer faculty appointment at the UNM College of Pharmacy for didactic lectures and student precepting
- Physical Assessment Certificate Program
- ACLS/BLS/PALS Certification
- Statistics for Pharmacy Residents



Critical Care PGY2 Pharmacy Residency Program

The UNM Hospital Pharmacy Department is excited to offer a Critical Care PGY2 residency. The Critical Care Residency will offers residents the opportunity to experience a cutting edge clinical training environment in addition to training alongside internationally recognized intensivists and various critical care fellows.

Here at UNMH we are the state's only Level I trauma center with 72 ICU beds spread across various specialties such as Medical/Cardiac ICU, Trauma/Surgical ICU, CardioThoracicVascular ICU, and Neurosciences ICU. The Critical Care Residency will offer the resident a unique opportunity to participate in the care of our adult ECMO patients. The UNMH ECMO program was founded in the 1990s and is currently designated an ELSO center of excellence with 38 adult ECMO cases in 2022. The UNMH Pharmacy department provides 18 hours of bedside pharmaceutical care in the ICUs and maintains a strong relationship with the ICU providers, providing the resident an established multidisciplinary environment.

Residency Rotations a combination of longitudinal and **4-week** experiences

Required 4-week Rotations

- Orientation
- Medical/Cardiac ICU I & II
- Trauma/Surgical ICU
- Cardiothoracic/Vascular
- Nutrition
- NeuroSciences ICU
- Infectious Diseases
- Emergency Medicine Overnight
- PM ICU

Required Longitudinal Rotations

- Research (2-4 weeks)
- Administration
- Teaching
- Staffing

Potential Elective

- Pediatric ICU
- Emergency Medicine II
- Toxicology
- Antithrombosis Stewardship
- Additional ICU Experience

Additional Residency Experiences

- Teaching certificate
- ACLS/BLS certification, ATLS audit
- Statistics for Pharmacy Residents

Recent Publications

Society of Critical Care Medicine Clinical Practice Guidelines for Rapid Sequence Intubation in the Critically Ill Adult Patient Critical Care Medicine 2023; 51 (10): 1281 – 1447. Acquisto N, Mosier J, Bittner E, Patanwala A, Hirsch K, Hargwood P, Oropello J, Bodkin R, Groth C, **Kaucher K**, et al.

Impact of Fluid Balance on Intensive Care Unit Length of Stay in Critically Ill Trauma Patients Am Surg 2023; 89 (8): 3379 – 3384. Bright T, Johnson D, Humanez J, Husty T, Crandall M, **Shald E**.

Factors Associated with Bleeding after Ultrasound-Assisted Catheter-Directed Thrombolysis for the Treatment of Pulmonary Embolism. Blood Coagul Fibrinolysis 2023;34(1):40-46 **Shald E**, Ohman K, Kelley D, Busey K, Erdman M, Smotherman C, Ferreira J.

Rapid Implementation of an Emergency On-site CKRT Dialysate Production System During the COVID-19 Pandemic BMC Nephrology 2023; 24 (1): 245 Teixeira J, Saa L, **Kaucher K**, Villanueva R, et al.

Contemporary hemodynamic management of acute spinal cord injuries with intravenous and enteral vasoactive agents: a narrative review American Journal of Health-System Pharmacy 2022; 79 (18): 1521 – 1530. ***2022 AJHP Top Twenty-Five Articles*** Iovine J, Villanueva R, Werth C, Hlavacek N, Rollstin A, Tawil I, Sarangarm P.

Balanced crystalloid versus normal saline as resuscitative fluid in diabetic ketoacidosis. Ann Pharmacother. 2022; 56 (9):998-1006.Carrillo A, Elwood K, Werth C, Mitchell J, **Sarangarm P**.

Find more information about our residency programs here.

Contact Information

Ruben D Villanueva, PharmD, BCPS, BCCCP
Critical Care PGY2 Program Director

Email RDVillanueva@salud.unm.edu
phone 505.925.7911

fax 505.272.2037

goto.unm.edu/pharmacyresidency



“The Critical Care Pharmacy Team is a vital member of the ICU multidisciplinary team. At UNMH, we care for the highest acuity patients in the state of New Mexico and we couldn’t do that without the support from our pharmacy colleagues.”

Jon Marinaro, MD
Co-Chief UNM Center Of Critical Care
Professor, UNM School Of Medicine



Thrombosis & Hemostasis PGY2 Pharmacy Residency Program

The UNM Health Sciences Center is excited to offer a PGY2 specialty residency in Thrombosis and Hemostasis Management (THM). Through a variety of clinical rotations, the resident will have opportunities to work with nationally-recognized preceptors and multidisciplinary teams to provide comprehensive care to diverse patient populations from across the Southwest region requiring antithrombotic or hemostatic therapies. We have a well-established pharmacy-driven anticoagulation stewardship program that will afford the PGY2 resident opportunities to advance their thrombosis and hemostasis knowledge, staff the clinical consultation service and gain valuable experience in continuous quality improvement. We have some of the most advanced pharmacy practice models in the country and the resident has the option of earning patient contact hours towards a New Mexico Pharmacist Clinician license that allows prescribing and billing. The program includes participation in a monthly education seminar with other THM residency sites across the country to provide additional learning and presenting opportunities, as well as networking and professional development.

Residency Rotations a combination of longitudinal and **4-week** experiences

Required 4-week Rotations

- Orientation
- 3 months Antithrombosis Stewardship (inpatient)
- Cardiology (inpatient)
- Classic Hematology (inpatient/outpatient)
- Neuro/Stroke (inpatient; ICU and step-down units)
- Emergency Medicine (inpatient)
- Cardiothoracic/Vascular ICU (inpatient)
- Antithrombosis Informatics (inpatient)
- Women’s Health (inpatient)
- Research

Required Longitudinal Rotations

- Medication Safety (inpatient)
- Research (research project with a publication-ready manuscript)
- Special coag lab (1st 6 months)
- Antithrombosis/Cardiovascular Risk Reduction Clinic (2nd 6 months)
- Teaching/Academia
- Leadership/Administration

Additional Residency Experiences

- Staffing Every Third Weekend in the Anticoagulation Steward Role
- Teaching Certificate Program (if not completed during PGY-1)
- Statistics for Pharmacy Residents
- Volunteer faculty appointment at the UNM College of Pharmacy for didactic lectures and student precepting
- Physical Assessment Certificate Program (if pursuing Pharmacist Clinician licensure)
- ACLS/BLS/PALS Certification

Recent Publications

Meador S, Dyke S, Togami J, Kuskov B, Burnett AE. Antithrombosis stewardship efforts to de-escalate inappropriate combined therapy in outpatient clinics. J Thromb Thrombolysis. 2021 <https://pubmed.ncbi.nlm.nih.gov/34410560/>

Marquez J, Togami J, Dant C, Herrera A, Marshik P, Burnett AE. Peri-procedural antithrombotic management: time to burn the bridge? J Thromb Thrombolysis. 2018 Apr;45(3):337-344. <https://doi.org/10.1007/s11239-018-1616-3>

Astrup G, Sarangarm P, Burnett AE. Fixed dose 4-factor prothrombin complex concentrate for the emergent reversal of warfarin: a retrospective analysis. J Thromb Thrombolysis. 2018 Feb;45(2):300-305. <https://doi.org/10.1007/s11239-017-1586-x>

Possible Elective Rotations

- Repeat any required 4-week rotation

Contact Information

Allison E. Burnett, PharmD, PhC, CACP
Antithrombosis Stewardship Pharmacist, PGY2 THM Residency Director

UNM Hospitals Pharmacy Administration
2211 Lomas Blvd NE
Albuquerque NM 87106

Email aburnett@salud.unm.edu
phone 505.272.2034
fax 505.272.2037

goto.unm.edu/pharmacyresidency



“Thrombosis and hemostasis is an exciting and dynamic field. As the treatment and prevention of thrombosis becomes increasingly complex and anticoagulant-associated harm continues to increase, it is evident that specialty training is needed to ensure optimized management of these high-risk therapies and promote safe and effective patient care. The national movement towards a model of thrombosis and hemostasis stewardship will require more advanced-trained pharmacists to serve as subject matter experts and/or stewardship program leaders. The Thrombosis and Hemostasis Residency at UNM hospital will provide you with a comprehensive learning experience that will prepare you to be able to provide expertise across multiple disciplines, disease states and clinical settings for both thrombotic and bleeding conditions. You will train alongside nationally and internationally recognized experts in the field within a mature stewardship service. The program director and preceptors provide challenging opportunities to support professional growth as well as encourage work-life balance to foster personal growth and job satisfaction. We offer a mixed inpatient and outpatient experience that will prepare our residents for any practice setting in which they may wish to build their careers.”

Taylor Goot MD SFHM FACP
Associate Chief Medical Information Officer for Inpatient Services
Medical Director UNM Antithrombosis Clinic
Co-Director UNMH Antithrombosis Stewardship
Associate Professor, Department of Internal Medicine
Division of Hospital Medicine



For More Information

Lisa M Anselmo PharmD, BCOP

Director of Clinical Pharmacy

505-272-2034

lmanselmo@salud.unm.edu

UNM Hospitals Pharmacy Administration

2211 Lomas Blvd NE

Albuquerque NM 87106

phone 505.272.2034 fax 505.272.2037

goto.unm.edu/pharmacyresidency