

# **Reaching Residency**

## ***Increasing Representation of Black Pharmacy Residents***

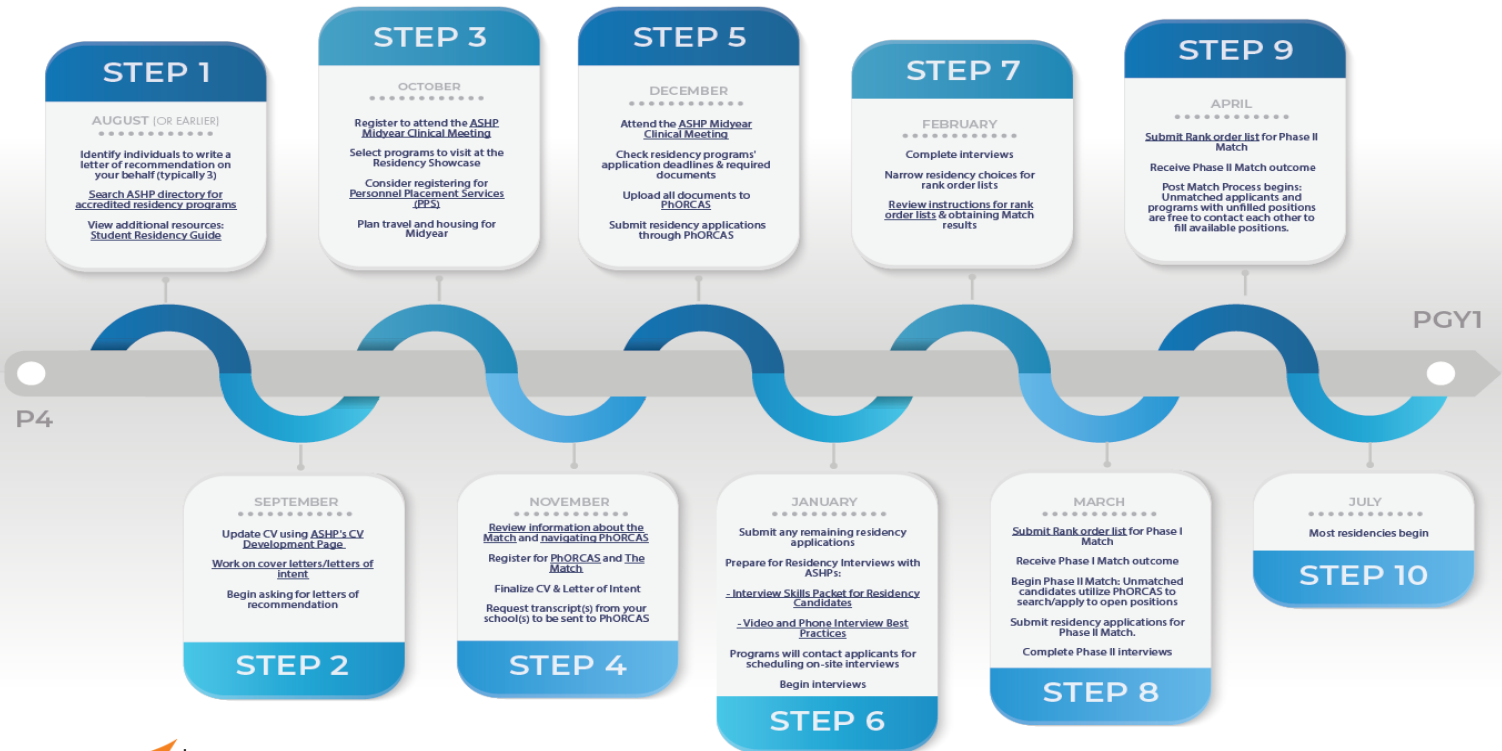
### **Resource Packet**

## Table of Contents

Program timeline .....	3
Personal program directory.....	6
Letter of intent examples.....	8
Curriculum vitae examples .....	12
Interview preparation materials .....	39
Case presentation examples .....	55
Clinical case examples .....	176
Supplemental essays .....	181
Preceptor orientation presentation slides .....	187
Prospective resident orientation presentation slides .....	203
Additional Resources.....	235

## Program Timeline

# Roadmap to Residency: P4 Timeline





## Key Dates

October 1 <sup>st</sup>	Personal placement services (PPS) opens
October 19 <sup>th</sup>	<ul style="list-style-type: none"> <li>Prospective residents reach out to preceptors for introduction</li> <li>Schedule dates for CV, LOI review, interview techniques</li> </ul>
November 1 <sup>st</sup>	<ul style="list-style-type: none"> <li>List of programs participating in the match made available</li> <li>Request transcript from schools of pharmacy</li> <li>Reach out individuals who will write LORs (x5)</li> <li>Business cards</li> <li>Schedule 1:1 interviews</li> </ul>
November 6 <sup>th</sup>	<ul style="list-style-type: none"> <li>Prospective resident will email list of programs of interest to preceptors</li> </ul>
November 3 <sup>rd</sup> - December 11 <sup>th</sup>	<ul style="list-style-type: none"> <li>Finalize CV, LOI, and any additional supplemental program specific essays</li> <li>Applicants can register for the Match via the shared PhORCAS/Match portal</li> <li>Registration portal can be accessed from the applicant registration page or directly at <a href="http://portal.phorcass.org">portal.phorcass.org</a></li> </ul>
December 18 <sup>th</sup> - December 31 <sup>st</sup>	<ul style="list-style-type: none"> <li>Submit PhORCAS application</li> <li>All applicants should have registered for the match (recommended)</li> </ul>
January 1 <sup>st</sup> - February 15 <sup>th</sup>	<ul style="list-style-type: none"> <li>Interviewing technique overview with preceptor</li> <li>Review clinical case examples and case presentation (provided)</li> <li>Review rank order list for phase 1 of match</li> <li>Thank you letters</li> </ul>
February 15 <sup>th</sup>	<ul style="list-style-type: none"> <li>Applicants and programs can submit rank order lists for Phase I of the match</li> </ul>
March 5 <sup>th</sup>	<ul style="list-style-type: none"> <li>Phase 1 rank order deadline</li> </ul>
March 19 <sup>th</sup>	<ul style="list-style-type: none"> <li>Phase 1 match day</li> </ul>
March 23 <sup>rd</sup>	<ul style="list-style-type: none"> <li>Application cycle for phase 2</li> </ul>
April 7 <sup>th</sup>	<ul style="list-style-type: none"> <li>Input rank order list for phase 2</li> </ul>
April 14 <sup>th</sup>	<ul style="list-style-type: none"> <li>Phase 2 match day</li> </ul>

# Personal Program Directory

Program	Location	Core Rotations	Elective Rotations	Other Requirements/ longitudinal	Salary	Benefits	PGY2
Medstar Georgetown University Hospital (2)	DC	9-Internal medicine, critical care, hematology/oncology, pediatrics, transplant, infectious diseases, ambulatory care, pharmacy administration, drug policy/drug information	3-ID, SICU, Ambulatory care, drug pol	2 DURs, four longitudinal aspects: anticoagulation clinic, drug distribution, drug policy, and oncology service.  one weeknight per week and one weekend per month  Anticoagulation Clinic: one afternoon per week  Present two journal club articles during the course of the residency  ACLS training and certification Participation in WMHSP Pharmacy or University of Maryland Teaching Certificate Program	45000	21 days annual leave, 7 holidays, health/dental/vision insurance, re	
Medstar Washington Hospital Center (4)	DC	9-Internal medicine, drug information, cardiology, oncology, medical intensive care, surgical intensive care, practice management, and advanced heart failure & heart transplant	2-Palliative care, neuroscience intensive care, burn/trauma, neonatal intensive care, and infectious disease	Have completed an additional 400 hours of independent pharmacy practice in distribution of medicines and prescriptions. This is work experience that is outside of school.	59400	Health/vision/dental insurance, 10 \Yes	
Sibley Memorial Hospital (2)	DC	internal medicine, critical care, oncology, drug information, central pharmacy practice, management, emergency medicine and geriatrics	Elective Rotations Oncology Geriatrics Infectious Disease	Presenting a residency project at the Eastern States Conference for Pharmacy Residents and Preceptors Completing, presenting and writing up a medication use evaluation Completing, presenting and writing up a Pharmacy and Therapeutics Committee monograph Completing, writing and publishing a departmental newsletter Presenting at least one Journal Club article Completing and presenting a formal seminar	47840	26 days paid time off, medical/dental/vision coverage, CE/travel exp	

# Letter of Intent Examples

December 28, 2018

Corey Witenko, PharmD, BCPS, BCCCP  
PGY1 Residency Program Director  
NewYork-Presbyterian Hospital  
Department of Pharmacy  
525 East 68th Street, Room K-04  
New York, NY 10065

Dear Dr. Witenko,

I am writing to express my interest in applying for the NewYork-Presbyterian (NYP) Hospital PGY-1 pharmacy practice residency. During the residency showcase at the ASHP Midyear Clinical Meeting, I learned more about your program and the infinite opportunities provided to prospective residents. NYP offers a variety of rotations, research, and teaching experiences that align with my career goals and clinical areas of interest, including infectious disease and oncology. As an academic medical center, your program will allow me to acquire the necessary skills to be a clinical leader and educator. My immediate goal is to be selected as your PGY-1 pharmacy practice resident with the long-term intention of practicing in a multidisciplinary setting where I can deliver excellent patient care. My diverse background in the pharmacy practice has helped me develop skills that will make me a great fit for your program.

Over the last few years, I have had the privilege of diversifying my experiences in community pharmacy, hospital pharmacy, and the pharmaceutical industry. Early on, my unique research experience working on investigational drugs in human clinical trials curated my skills in data monitoring and protocol management, driving me to become results oriented. However, while conducting clinical research and interning at Pfizer, I realized that my passion better aligns with direct patient care. My clinical rotations taught me to implement pharmacy interventions, chart in electronic records, conduct medication reconciliations, and deliver pharmacy in-service presentations. Most importantly, I have become proficient in interdisciplinary care and built on my clinical skills in internal medicine, infectious disease, ambulatory care, and critical care. One of my most rewarding experiences was spending 5 weeks abroad in Ethiopia where I learned firsthand how to use evidence-based medicine in resource-limited areas. I also learned how to manage the complexity of cancer patients. This opportunity has cultivated me to be a self-directed learner while simultaneously learning how to become culturally competent by immersing myself in an unfamiliar environment. This also heightened my desire to serve underrepresented communities and manage patients with the highest acuity and complexity.

My extracurricular involvement and work experiences have directly prepared me for the multitude of duties responsible as a resident. My strength to see goals implemented is evidenced through my presidency of the American Pharmacists Association-Academy of Student Pharmacists, where my main goal was to increase the national presence of my chapter. In my year as president, I increased my chapter's membership by over 120%, guided a member to be on the regional board for the first time in our chapter's history, and received national recognition for my patient led programs. Through these experiences, I have developed a passion to work in the clinical setting and I am zealous to use my clinical training in a dynamic manner.

I am confident that my intellect, desire to learn, and relentless passion for the field of pharmacy will allow me to thrive in your program. Each learning experience directly correlates with my aspirations of functioning as a well-rounded practitioner and I look forward to working in the innovative and collaborative environment NYP provides. The success of your past residents is inspiring and I too hope to make an impact in the profession. Unquestionably, the training program at NewYork-Presbyterian Hospital will help mold me into the impactful clinician and leader I aspire to be. Thank you for your consideration and I look forward to the opportunity to visit your institution.

Sincerely,

Iman Ahmed  
PharmD Candidate 2019  
Howard University College of Pharmacy



LeAnne Kennedy, PharmD, BCOP, CPP, FHOPA  
PGY2 Oncology Pharmacy Residency Program Director  
Wake Forest Baptist Health  
1 Medical Center Boulevard  
Winston-Salem, NC, 27157

Dear Dr. Kennedy:

I am writing to express my sincere interest in the PGY2 Oncology Pharmacy Residency program at Wake Forest Baptist Health. Our conversation at the Midyear Clinical Meeting left a lasting impression. You were kind enough to explain the tremendous opportunities this program offers, and I was able to visualize the impact that oncology pharmacy has at Wake Forest Baptist Health.

My exposure to oncology began when a guest speaker came to speak to my class in high school. In short, his son was diagnosed with acute lymphocytic leukemia and passed away due to complications from the disease, but he started an organization that provides resources for families affected by leukemia. This organization is titled the B+ Foundation, and is named after his son's blood type. When he spoke to me, he talked of the comfort, support, and education provided to him by his son's healthcare providers. This instant is engraved in my memory, as it is the moment I decided to pursue a career in oncology.

Since then, my determination to become an oncology pharmacist was solidified after completing oncology rotations, both as a pharmacy student at UPMC and as a PGY1 pharmacy resident at NewYork-Presbyterian Hospital. My desire to provide care to oncology patients heightened through my active involvement in interdisciplinary rounds on oncology services and diligent literature reviews on oncology topics. I have further strived to expand my oncologic knowledge through journal clubs and case presentations during my time as a PGY1 pharmacy resident. Beyond oncology practice, my PGY1 pharmacy residency challenges me to learn new guidelines and be an expert on all-encompassing disease states. I continue to achieve my goals of expanding on my pharmacotherapy knowledge and developing as an independent practitioner. Through in-depth rotations and meticulous presentations, I honed the skills necessary for a successful PGY2 pharmacy resident: critical thinking, collaboration, conflict resolution, and communication.

The PGY2 Oncology Pharmacy Residency Program at Wake Forest Baptist Health offers a rigorous curriculum with strong, personalized mentorship – qualities that I greatly appreciate and desire. Your program extends a vast array of clinical rotations encompassing both inpatient and outpatient oncology practice and further allows residents to individualize their training with numerous elective rotations. This level of diversity and flexibility coupled with the rigor of your resident rotation schedule is a distinguishing feature. Furthermore, Wake Forest Baptist Health encourages residents to be life-long learners and provides residents with the resources necessary to pursue additional certification, including the Clinical Pharmacists Practitioners (CPP) certification. It is evident that your program is highly invested in the current and future success of its residents. As an NCI-designated cancer center and a large academic medical center, Wake Forest Baptist Health is the perfect environment for residents to develop as innovators, educators, and researchers as well as proficient oncology clinical practitioners.

I know our strengths, desires, and aspirations align perfectly. Your program offers well-rounded rotations encompassing many fields of oncology pharmacy practice and significant teaching experiences – attributes I seek in a residency program. The success of your past residents is truly inspiring and I wish to continue that legacy. I have the skills and the hunger to continue my training as a leader, an outstanding oncology clinician, and as a member of the Wake Forest family. Thank you for your consideration of my candidacy. I appreciate the time you have taken to speak with me and I look forward to hearing from you.

Sincerely,

Neha Poladi, PharmD  
PGY1 Pharmacy Resident  
NewYork-Presbyterian Hospital

# HOWARD UNIVERSITY

Ginikannwa Ezeude  
5555 Fifth Street NE  
Washington, DC 20001

ASHP Match #: 55555

Steven L. Allison, Pharm.D  
Residency Program Director  
Florida Hospital Orlando – Advent Health  
Department of Pharmacy  
601 East Rollins Street  
Orlando, FL 32803

Dear Dr. Allison,

I am writing to express my strong interest in the Florida Hospital Advent Health's PGY-1/ PGY-2 Health Systems Pharmacy Administration (HSPA) residency program in Orlando. Some of the key features of the program that peaked my personal interest include the potential to rotate in Infectious Disease/Antimicrobial Stewardship, Ambulatory Care, Ambulatory Services & 340B Compliance and Finance & Asset Management. A PGY-1/PGY 2 Health-System Pharmacy Administration Residency with MHA from Florida Hospital would contribute to my 10-year career goal of being able to effectively run an ambulatory care clinic that provides optimal patient care services to underserved communities. The masters provided within this program will not only provide me with specialized training in healthcare administration but will also allow for concepts learned didactically to be integrated into the clinical and operational practice setting. In conversations with Dr. Patel at ASHP Midyear 2018, I learned that this residency not only provides robust training to its residents, but also is flexible in tailoring the training experiences to the resident's needs. Dr. Patel assured me that no matter a person's interests, health-system pharmacy administration residents come out of training at Florida Hospital feeling well equipped to actualize their dreams in whatever management role they pursue.

I believe that many of my past experiences both in and outside of Howard University College of Pharmacy align with Florida Hospital's philosophy of C.R.E.A.T.I.O.N Health, which is centered on making the connection between faith and wellness. I particularly resonate with the tenets of 'Interpersonal Relationships' and 'Outlook'. I have seen these tenets at play in my role as Chief of Finance of Capitol City Pharmacy Medical Reserve Corps (CCPMRC), the only pharmacy reserve corps in the nation, and in my international advanced pharmacy practice experience in Lusaka, Zambia. In my role as Chief of Finance of CCPMRC, I had to maintain strong interpersonal relationships with a variety of pharmacy personnel and other healthcare professionals that I collaborated with in order to provide emergency preparedness education and general health services to the DC community. In this role, I was also responsible for managing our budget of roughly \$30,000 via our partnership with the DC Department of Health and the National Association of County and City Health Officials (NAACHO) to ensure that the MRC's outreach events could be adequately supported financially and that we could provide certain deliverables to our grantors at the end of every fiscal year. My belief in 'Outlook' being the shaper of ones' reality compelled me to take initiative during my time in Lusaka, Zambia, where I saw a need for health outcomes to be optimized with respect to drug therapy in patients living with HIV. As such, I created a pharmacovigilance tool to ease the documentation of ADRs in HIV+ patients on continuous anti-retroviral therapy (ART) at Matero Level One Hospital; the tool would in turn increase the reporting of ADRs to the Zambia Medicines Regulatory Authority (ZAMRA), improve overall workflow within the ART clinic and bolster the average patient's outlook on the level of quality and comprehensive care they would receive at the clinic.

Ultimately, my experiences will support my ability to thrive in Florida Hospital's PGY-1/ PGY-2 Health Systems Pharmacy Administration (HSPA) residency program and will enable me to be an asset in pushing forward the Hospital's overall mission. I look forward to the opportunity to visit your institution, and thank you for your consideration of my application.

Sincerely,

*Ginikannwa Ezeude*

Ginikannwa Ezeude  
PharmD Candidate 2019

# Curriculum Vitae Examples



# Iman Ahmed

555 Florida Ave NE, Apt 555  
Washington, D.C., 20005  
555-555-5555  
John.howard@gmail.com

## **EDUCATION**

---

<b>Doctor of Pharmacy Candidate</b> Howard University College of Pharmacy, Washington, D.C.	08/2015 - Present
<b>Bachelor of Science</b> University of Georgia, Athens, GA	08/2010 - 05/2014

## **LICENSURES & CERTIFICATIONS**

---

CPR/AED Certificate; National CPR Foundation	03/2018 - Present
HIPAA Certificate; Howard University Hospital	03/2018 - Present
Infection Control Certificate; Howard University Hospital	03/2018 - Present
Immunization Certificate; American Pharmacists Association	04/2016 - Present
Pharmacy Intern: License No. PHI0810; Washington D.C. Board of Pharmacy	03/2016 - Present

## **PROFESSIONAL EXPERIENCES**

---

<b>Pharmacy Intern</b> , Walgreens Pharmacy Washington, D.C. Supervisor: Laly Havern, PharmD <ul style="list-style-type: none"><li>• Prepare medications following the institution's standards as it relates to pharmaceutical care via pharmacist supervision</li><li>• Counsel diverse patients on medication administration, adherence, adverse effects, and drug interactions</li><li>• Deliver accurate, adequate, and timely drug information and dosing calculations to the pharmacist</li></ul>	09/2016 - Present
<b>Graduate Assistant</b> , Howard University Washington, D.C. Supervisor: Yetunde Akinola, BS <ul style="list-style-type: none"><li>• Managed 16 resident assistants and over 500 undergraduate students' well being and academic success</li><li>• Developed building policies and procedures as training materials for staff and maintenance of building operations</li><li>• Initiated communication strategies supporting the Department of Residence Life</li></ul>	07/2016 - 05/2018
<b>US Medical Affairs Intern</b> , Pfizer Inc. Collegeville, Pennsylvania Supervisors: Liza Takiya, PharmD, BCPS, FCCP & Chudy Nduaka DVM., Ph.D. <ul style="list-style-type: none"><li>• Supported US Medical Affairs (USMA) team by contributing to competitive intelligence plans, creating internal education documents, and</li></ul>	05/2016 - 12/2017

- streamlining marketing strategies
- Created competitive landscape models based on clinical trial results for field-medical teams
- Designed a robust cardiovascular risk database to contextualize a key clinical dataset

**Research Pharmacy Technician**, Atlanta Center for Medical Research

06/2014 - 07/2015

Atlanta, Georgia

Supervisor: Hagar Badawy, PharmD

- Maintained a perpetual inventory of investigational products (IP) and ensured real-time data capture of the disposition of all IP
- Assembled and implemented pharmacy source documents to meet protocol, Good Clinical Practice, and FDA requirements
- Participated in routine Site Initiation Visits (SIV), Site Monitoring Visits (SMV), and Close Out Visits (COV) for a wide exposure of clinical trials focused on indications such as psychiatric disorders, hyperlipidemia, COPD, osteoarthritis, and diabetes

## **ADVANCED PHARMACY PRACTICE EXPERIENCES**

---

**Community**

02/2019 - 03/2019

Grubb's Southeast: Washington, D.C.

Preceptor: William Fadel, PharmD

**Health Systems**

01/2019 - Present

Virginia Hospital Center: Arlington, VA

Preceptor: Karima Waziri, PharmD

**Infectious Disease**

11/2018 - 12/2018

Howard University Hospital: Washington, D.C.

Preceptor: Monika Daftary PharmD, BCPS, AAHIVP

- Provided concise, applicable, and timely drug information responses
- Developed and charted therapy plans and monitoring parameters for patients using resistance patterns, co-infections, and drug interactions
- Conducted point of care HIV testing services using OraQuick™

**Critical Care- Surgical Intensive Care Unit**

10/2018 - 11/2018

Georgetown University Medical Center: Washington, D.C.

Preceptor: Nicole Harriott, PharmD

- Collected, identified, and assessed pertinent patient data for daily rounds and participated in management of medical emergencies
- Developed vancomycin recommendations by adjusting for patient's renal function, therapeutic drug levels, and pharmacokinetics
- Recommended treatment and monitoring plans for post surgical patients to interdisciplinary team utilizing acuity status, complexity of organ function, and evidence-based medicine

**Internal Medicine**

09/2018 - 10/2018

Veteran Affairs Medical Center: Washington, D.C.

Preceptor: Sumana Alex, PharmD

- Collected relevant information to evaluate appropriate indication, dosing,

administration, drug interactions, and adverse effects to make concise recommendations on daily multidisciplinary rounds

- Performed medication reconciliation for newly admitted patients to prevent medication errors, identify medications important for hospital stay, and ensure continuation of care
- Presented an in-service on current and prospective treatment options for Alcohol Withdrawal Syndrome

### **Ambulatory Care**

07/2018 - 08/2018

Kaiser Permanente: Washington, D.C.

Preceptor: Bonnie Li-MacDonald, PharmD, BCPS

- Communicated with patients weekly on clinical status, medication adherence, and plan of care particularly in diabetic patients
- Assessed pharmacotherapy plan for effectiveness and documented recommendations into patients' medical charts
- Counseled patients on inhaler use and diabetes injectable administration

### **Publications and Scientific Content**

06/2018 - 07/2018

Bristol Myers Squibb (BMS): Princeton Pike, NJ

Preceptor: Noha Sabbahi, PharmD

- Supported the BMS Medical Group by collaborating on standard response documents for Opdivo® and engaged in meetings for publication planning
- Presented a journal club on latest competitor data and place in therapy
- Presented on the standard of care, current research, and future treatment of pancreatic cancer after identifying it as an unmet need

### **Inpatient Oncology**

05/2018 - 06/2018

Black Lion Hospital: Addis Ababa, Ethiopia

Preceptor: Bisrat Hailemeskel, PharmD

- Monitored and evaluated patient outcomes through laboratory findings, clinical presentation, and medical rounds
- Led bed side presentations particularly on patients with leukemia
- Identified areas of improvement in health care delivery and critically thought of solutions to advance hospital system

## **INTRODUCTORY PHARMACY PRACTICE EXPERIENCES**

**Bridgepoint Hospital:** Washington, D.C.

05/2017 - 06/2017

Preceptor: Helena Lee, PharmD

- Assisted the pharmacist to accurately prepare and dispense prescriptions and IV medications
- Calculated ingredients needed to prepare IV products and utilized sterile compounding to make total parenteral nutrition bags
- Participated in weekly interdisciplinary meetings to discuss patient prognosis and hospital care to minimize length of stay

**Columbia Heights Pharmacy:** Washington, D.C.

12/2016 - 01/2017

Preceptor: Elizabeth Puwo, PharmD

- Dispensed prescriptions after ensuring proper patient information, medication regimen, dose, frequency, and counseling
- Assisted patients with over the counter products, drug information questions, and served as a liaison to the pharmacist
- Communicated with physicians, patients, and third parties to resolve insurance issues

## **TEACHING EXPERIENCES**

---

**Sodium and Fluid Disorders**

06/2018

Addis Ababa University School of Pharmacy, Addis Ababa, Ethiopia

Preceptor: Bisrat Hailemaskel, PharmD

- Taught on the clinical presentation and management of sodium disorders to 40 Masters of Pharmacy students

**Pharmaceutical Science I & II**

01/2017 - 12/2017

Howard University College of Pharmacy, Washington, D.C.

Preceptor: Amol Kulkarni Ph.D.

- Academic tutor for first and second year pharmacy students

## **PROFESSIONAL ORGANIZATIONS AND LEADERSHIP ACTIVITIES**

---

Howard University College of Pharmacy Professionalism Board

- Student Advisor

08/2018 - Present

American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP)

- National Membership Engagement Standing Committee
- President
- President-elect
- Over-The-Counter Literacy Chair

05/2018 - Present

06/2017 - 05/2018

06/2016 - 05/2017

09/2015 - 05/2016

National Workforce Diversity Pipeline Program

- Student Mentor

09/2017 - 07/2018

AcademyHealth

- Vice-President

10/2016 - 07/2018

College of Pharmacy Assessment Committee

- Student Representative

12/2016 - 05/2018

Capitol City Pharmacy Medical Reserve Corps (CCPMRC)

- Chief of Public Relations

07/2016 - 05/2017

Industry Pharmacists Organization

- Historian

02/2016 - 05/2017

Howard University College of Pharmacy Professionalism Newsletter

- Editor

09/2015 - 05/2016

Pharmacy Initiative Leaders

- Mentor

08/2015 - 05/2017

## RESEARCH EXPERIENCES

**Research Assistant**, Howard University College of Pharmacy 08/2017 - 05/2018  
*"Evaluation of the Extent and Impact of Gender Sensitive Advertising and Promotional Labeling of Health Products"*

- Collaborated on a FDA supported grant with the Office of Women's Health to promote health equity as it relates to the care of women
- Performed systematic literature review to identify areas of disparity, guideline adherence, and communication as it relates to women

**Research Assistant**, Howard University College of Pharmacy 07/2017 - 03/2018  
*An examination of the role of advertising and promotional labeling in adult immunization disparities*

- Collaborated with FDA's Office of Minority Health
- Created culturally sensitive material for healthcare professionals and consumers to address the barriers seen in receipt of vaccines amongst minority seniors

**Research Assistant**, Howard University College of Pharmacy 08/2016 - 12/2016  
*"A Crowdsourced Comprehensive Database of Rare Diseases Prevalent in African Americans"*

- Completed a literature review and outcome analysis of rare and orphan diseases particularly of those in the African American population
- Created a database of all analysis in order to promote the development of orphan medications for the diseases featured

## PUBLICATIONS

La'Marcus WT, Stubbs K, **Ahmed I**, Mayaka RK, Maneno MK, Ettienne E, Elekwachi O, Clarke-Tasker V. The Economic Impact of Herpes Zoster Vaccine Disparities in Elderly United States Blacks. *Int. J. Environ. Res. Public Health* 2018. 15(10), 2128, <https://doi.org/10.3390/ijerph15102128>.

## POSTER PRESENTATIONS & GRANT PROPOSAL

Lee H, **Ahmed I**. (December 9, 2017) *Evaluating the accuracy of a medication reconciliation process during transition to a long-term acute care hospital (LTACH) to minimize preventable medication errors*. American Society of Health-System Pharmacists Annual Meeting. Orlando, FL.

**Ahmed I**. (August 9, 2017). Project Updates on Internship Experience in US Medical Affairs. Pfizer Summer Student Worker Meeting. Philadelphia, PA

Co-Author for the grant proposal of the 2017 Medical Reserve Corps Challenge Award of \$15,000

Nwosu, O., Brown, D., Frazier, R., & **Ahmed, I**. (July 27, 2016). *Effectiveness of a University-Based Pharmacy Medical Reserve Corps in increasing the number of pharmacy personnel trained to respond during an emergency event*. Student National Pharmaceutical Association Annual Meeting. Atlanta, GA.

## HONORS & AWARDS

Dean's List	09/2018
American Association of Colleges of Pharmacy Walmart Scholar	04/2018
Howard University College of Pharmacy Student of the Year Award	03/2018
American Pharmacists Association Foundation Scholar- Mary Munson Runge	02/2018

Mentor of the Year- Pharmacy Initiative Leaders	08/2017
Howard University College of Pharmacy Academic Scholarship	08/2017
APhA-ASP Certificate of Appreciation	05/2017
Dean's Recognition Award	04/2017
Phi Lambda Sigma Leadership Society Inductee	04/2017
Rho Chi Honor Society Inductee	02/2017
Certificate of Honor for Superior Academic Performance	02/2017
HU Pharmacy Alumni Association Doctor of Pharmacy Scholarship	10/2016
Howard University College of Pharmacy Academic Scholarship	06/2016
Howard University College of Pharmacy Scholarship	01/2016
Howard University College of Pharmacy NIH Scholarship	08/2015
University of Georgia Cum Laude Graduate	05/2014

## **PROFESSIONAL & CLINICAL PRESENTATIONS**

---

<b>APhA-ASP Membership Engagement</b>	11/2018
Location: Radisson Hotel, Baltimore, MD	
Audience: Pharmacists, pharmacy students, APhA-ASP staff	
<b>APhA-ASP Patient Care Projects</b>	11/2018
Location: Radisson Hotel, Baltimore, MD	
Audience: Pharmacists, pharmacy students, APhA-ASP staff	
<b>Kcentra® Use in Liver Failure</b>	11/2018
Location: Medstar Georgetown University Hospital, Washington, D.C.	
Audience: Pharmacists and pharmacy students	
<b>Alcohol Withdrawal Syndrome</b>	09/2018
Location: Veterans Affairs Medical Center, Washington, D.C.	
Audience: Pharmacists and pharmacy technicians	
<b>Role of Sacubitril/Valsartan in Heart Failure</b>	08/2018
Location: Kaiser Permanente, Washington, D.C.	
Audience: Pharmacists	
<b>Iron Deficiency Anemia: Oral Iron Preparations</b>	08/2018
Location: Kaiser Permanente, Washington, D.C.	
Audience: Pharmacists and pharmacy students	
<b>Pancreatic Cancer: Review of Current Standard of Care and Future Landscape</b>	07/2018
Location: Bristol-Myers Squibb, Princeton Pike, NJ	
Audience: Pharmacists, physicians, and pharmacy students	
<b>Journal Critique: Pembrolizumab in patients with advanced hepatocellular carcinoma previously treated with sorafenib (KEYNOTE-224): a non-randomized, open-label phase 2 trial</b>	07/2018
Location: Bristol-Myers Squibb, Princeton Pike, NJ	

Audience: Pharmacists, physicians, and pharmacy students

**Patient Case Presentation: Acute Myeloid Leukemia** 06/2018

Location: Black Lion Hospital, Addis Ababa, Ethiopia

Audience: Pharmacists, physicians, and pharmacy students

**Probiotic Use to Prevent *Clostridium difficile*** 08/2017

Location: Howard University College of Pharmacy, Washington, D.C.

Audience: Pharmacists and pharmacy students

**Pfizer Medical Strategy Review in Inflammatory Bowel Disease** 08/2017

Location: Pfizer, Collegeville, PA

Audience: Pharmacists, physicians, and Pfizer employees

**Pfizer Medical Strategy Overview in Rheumatoid Arthritis** 08/2016

Location: Pfizer, Collegeville, PA

Audience: Pharmacists, physicians, and pharmacy students

**COMMUNITY SERVICE**

---

Hepatitis A and Influenza Immunization Outreach 11/2018

Immunization Education Outreach 04/2018

APhA-ASP Involvement Beyond Howard Panel 03/2018

Veteran Affairs Medical Center Immunization Program 11/2017

Project Homeless Health Fair 10/2017

Empower the Community 08/2017

Capitol City Pharmacy Medical Reserve Corps 5<sup>th</sup> Annual Wellness Fair 04/2017

Latte and Lobbying 03/2017

First Baptist Church Health Fair 02/2017

OTC Literacy Education Program 11/2016

Veteran Affairs Flu Clinic 10/2016

Project Homeless Health Fair 10/2016

African American Museum Patient Triage 09/2016

Capitol City Pharmacy Medical Reserve Corps Patient Tracking Services 09/2016

Capitol City Pharmacy Medical Reserve Corps 4<sup>th</sup> Annual Wellness Fair 04/2016

Prescription Drug Abuse Assessment 03/2016

Health Fair-LeDroit Community 03/2016

Thanksgiving Point of Dispensing Activity 11/2015

Step Out to End Diabetes Walk 10/2015

**REFERENCES**

---

Available on request

# Ginikannwa I. Ezeude

6485 1<sup>st</sup> Street NE | Washington, DC 20001 | M: 555.555.5555 | E: john.doe@gmail.com

## EDUCATION

---

August 2015 – Present **Doctor of Pharmacy**

*Howard University College of Pharmacy: Washington, DC*

May 2015

**B.A. Biochemistry**

*Barnard College of Columbia University: New York, NY*

## WORK EXPERIENCE

---

April 2018 – Present

**Pharmacy Intern**

Grubb's Pharmacy

*Washington, DC*

- Filled prescriptions and facilitated pharmacy workflow
- Handled called-in prescriptions and voicemail requests for refills from patients

April 2017 – Present

**Chief of Finance**

Capitol City Pharmacy Medical Reserve Corps (CCPMRC)

*Washington, DC*

- Managed a budget of over \$30,000 (via Department of Health and National Association of County and City Health Officials) and provided other advisory board members with funds to facilitate our outreach events and initiatives

## ADVANCED PHARMACY PRACTICE EXPERIENCE

---

(All rotations are 5 weeks in length)

Nov. – Dec. 2018

**Ambulatory Care – Infectious Diseases**

Center for Infectious Disease Management and Research (CIDMAR) – Howard University Hospital

*Washington, DC*

Preceptor: Monika Daftary, Pharm.D

- Documented pharmacy encounter notes under patient profile after evaluating patients with HIV, Hepatitis C, Hepatitis B, Tuberculosis, Syphilis, and other infectious diseases for appropriateness of treatment regimen and necessary changes
- Provided evidence-based recommendations to physician on medication renal dosing adjustments and vaccinations for patient
- Counseled patients on medication adherence and compliance during clinic visits
- Conducted HIV-Testing using Oral Swab method
- Executed prior authorizations for patients receiving Hepatitis C treatment under various types of insurance (i.e. UnitedHealth, Trusted Health Plan, etc.)

Oct. – Nov. 2018

**Hematology/Oncology – Outpatient**

MedStar Georgetown University Hospital

*Washington, DC*

Preceptors: Khang Ho, Pharm.D & Matthew Boyd, Pharm.D

- Boosted pharmacy workflow by assisting with the retrieval and preparation of chemotherapeutic agents for patients in our outpatient infusion clinic



- Presented an in-service to the entire oncology pharmacy staff on the Extravasation of Irritant and Vesicant Chemotherapeutic Agents
- Participated in Investigational Drug Services by assisting with the workflow of the oncology research pharmacy that processed medications for patients participating in ongoing clinical trials (i.e. IRB# 2017-1081)

Aug. – Oct. 2018

### **Administration & Outpatient Pharmacy Practice**

Kaiser Permanente

*Marlow Heights, MD*

Preceptor: Zelalem Bekele, Pharm.D

- Processed, filled and counseled patients their prescriptions (i.e. warfarin, dabigatran, combivent respimat, etc.)
- Compounded Magic Mouthwash and Clonidine 0.1mg/mL Oral Suspension for pediatric patients with ADHD
- Performed Medication Adherence calls to patients receiving chronic medications for diabetes, hyperlipidemia and hypertension
- Participated in administrative meetings to assess the metrics (i.e. Member Experience %, JD Power, etc.) of the Mid-Atlantic medical centers, as well as reviewed formulary changes and year-to-date cost-savings for the region

July – Aug. 2018

### **Solid Organ Transplant**

MedStar Georgetown University Hospital

*Washington, DC*

Preceptors: Annelise Nolan, Pharm.D & Suhail Shaikh, Pharm.D

- Provided medication based interventions to the transplant team
- Completed Medication Reconciliations for kidney, pancreas, liver, and small-bowel transplant recipients/donors
- Counseled patients on immunosuppressive medications upon discharge

June – July 2018

### **International Rotation – Infectious Diseases**

Matero Level One Hospital – Antiretroviral (ART) Clinic

*Lusaka, Zambia*

Preceptors: Henry Fomundam, Pharm.D & Tamara Choola, Pharmacy

Technologist

- Recommended treatment interventions for over 100 HIV+ patients during clinic visits and fast-track encounters under the differentiated service delivery model
- Amplified the clinic's pharmacovigilance efforts by assisting with the identification and record-keeping of ADRs
- Reported several ADRs to Zambia Medicines Regulatory Authority (ZAMRA)
- Engineered pharmacovigilance tools for continued use in the ART Clinic

May – June 2018

### **Internal Medicine**

Veteran Affairs Medical Center

*Washington, DC*

Preceptor: Sumana Alex, Pharm.D

- Analyzed patient profiles and recommended patient interventions related to drug-drug interactions, dose adjustments, etc.
- Rounded and contributed patient-related information to the team regarding patient start and stop dates for certain medications, as well as medication alternatives.
- Performed patient discharge counseling (i.e. demonstrated to newly diagnosed diabetic patient how to utilize Novolog Flexpen, etc.)

## ANTICIPATED ADVANCED PHARMACY PRACTICE EXPERIENCE

---

- Jan. – Feb. 2019      **Health Systems**  
Trusted Health Plan  
*Washington, DC*  
Preceptors: Jose Diaz-Luna, Pharm.D
- Feb. – Mar. 2019      **Regulatory & Health Policy**  
BGB Group  
*New York, NY*  
Preceptors: Brendon Phalen, Pharm.D

## INTRODUCTORY PHARMACY PRACTICE EXPERIENCE

---

- May – June 2017      **Hospital Inpatient Pharmacy**  
Children's National Medical Center (CNMC)  
*Washington, DC*  
Preceptor: Chukwuemeka Emenanjo, Pharm.D
- Rounded on the Neonatal Intensive Care Unit (NICU) and the Pediatric Intensive Care Unit (PICU) with the Care Team as well as presented weekly on standard of care therapies
  - Reviewed patient profiles and verified medication dosing calculations
  - Received training in USP797 and USP800 and compounded sterile preparations in the Intravenous (IV) room
- June – July 2016      **Community Pharmacy**  
Pharmacy Care & Wellness Center on H Street  
*Washington, DC*  
Preceptor: Stephanie Young, RPh
- Counseled patients on the stipulations of their insurance as well as on proper medication use
  - Oversaw and inspected inventory
  - Engaged with physicians on patient concerns related to their medications and prescriptions

## RESEARCH EXPERIENCE

---

- June 2017 – Present      **Opioid Use Disorder (OUD) Research**  
*Howard University College of Pharmacy*  
Principal Investigator: Earl Ettienne, RPh, MBA & Adaku Ofoegbu, Pharm.D
- Collected opioid dependence data from patient EMRs about their clinic encounters and medication regimens for analysis to determine optimal dosage of Suboxone treatment
  - Organized data, which included patient's specific pharmacogenomics, meant to correlate and determine safe and effective Suboxone dosing for OUD
- May – Dec. 2017      **Development of Pharmacy Information System (PIS) for the DoseEdge Workflow Manager**  
*Children's National Medical Center*  
Principal Investigator: Patrick Kerr, Pharm.D
- Assisted the pharmacy manager in creating a new guide for all IV medications used in the hospital for safety and efficacy
  - Made recommendations regarding dispensing instructions for pharmacists, physicians, and nurses
  - Gathered data for drug information input for DoseEdge

July 2016 – May 2017

### **Nanoparticle Synthesis and Drug Delivery Research Laboratory**

*Howard University College of Pharmacy*

Principal Investigator: Emmanuel Akala, Pharm.D

- Synthesized poly-ε-caprolactone macromonomer and the pH-sensitive cross-linker, necessary components in the fabrication of the targeted nanoparticle used in the delivery of anticancer bioactive agents for the treatment of breast cancer
- Characterized the macromonomer using Nuclear Magnetic Resonance (NMR) and Gel Permeation Chromatography (GPC)
- Coordinated with other lab personnel, including PhD and post-doctoral students, in the purification process of the cross-linker

## **TEACHING EXPERIENCE**

---

May 2016 & May 2017

### **Anatomy & Physiology Instructor**

Center of Excellence ACSEP Tier II Program

*Howard University College of Pharmacy*

- Instructed the entirety of this undergraduate level course, which included creating and presenting lectures on various topics in Anatomy and Physiology as well as generating exam questions, holding review sessions and giving students final course grades

Aug – Dec. 2016

### **Pharmaceutical Calculations Tutor**

Center of Excellence Tutorial Services

*Howard University College of Pharmacy*

- Held 1-2 hour tutorial sessions for the Class of 2020
- Engaged with the course coordinator to determine which topics required special attention during the tutoring sessions

July 2016

### **Biochemistry Instructor**

Pharmacy Biomedical Preview Program

*Howard University College of Pharmacy*

- Created and presented lectures on topics in Biochemistry
- Formulated and administered assessment questions

## **PROFESSIONAL PRESENTATIONS**

---

Dec. 2018

**Ezeude, G.**, Walker, C., Ettienne, E., Ofoegbu, A., Williams, S., Briggs, J., Maneno, M., Nguyen, K., Wilson, B., Chapman, E., *Pharmacogenomics in Opioid Use Disorder Management*. Presented at the American Society of Health-Systems Pharmacists (ASHP) Midyear Conference. Anaheim, CA

April 2018

**Ezeude, G.**, Soribe, N., McCants, T., *Effectiveness of a College-Based Pharmacy Medical Reserve Corps in Increasing the Number of Pharmacy Personnel Trained to Respond During an Emergency Event*. Presented at the National Association of County and City Health Officials (NAACHO) Preparedness Summit. Atlanta, GA

Dec. 2017

**Ezeude, G.**, Merritt, M., Kerr, P., *Utilizing Student Pharmacists To Develop a Pharmacy Information System for the DoseEdge Workflow Manager in a Children's Hospital*. Presented at the American Society of Health-Systems Pharmacists (ASHP) Midyear Conference. Orlando, FL

## PUBLICATIONS

---

Ettienne, E., Ofoegbu, A., Maneno, M., Wingate, L., Dunston, G., Kurian, P., Wilson, B.D., Nguyen, K., **Ezeude, G.**, and Augusto, J. 2017. Public choice theory and rhetoric: advancing pharmacogenomics through health policy in Africa. *African Journal of Rhetoric*: 119-142

## PROFESSIONAL AFFILIATIONS

---

Feb. 2018	The American Pharmacists Association (APhA)
Oct. 2017	The American Society of Health-Systems Pharmacists (ASHP)
April 2017	Pharmacy Leadership Society – Phi Lambda Sigma (PLS) – Beta Rho Chapter
Feb. 2017	Rho Chi Pharmacy Honor Society

## LEADERSHIP

---

April 2018 – Present	<b>President</b> <i>Pharmacy Leadership Society, Phi Lambda Sigma – Beta Rho Chapter</i> <ul style="list-style-type: none"><li>Organized and Facilitated E-board Meetings and General Body Meetings</li><li>Formulated and orchestrated innovative changes to the organization's mission and workflow (i.e. adding additional workshops in our Leadership Series, initiating a trademark event, bolstering our intake process)</li></ul>
May 2017 – April 2018	<b>President (Regent)</b> <i>Kappa Psi Pharmaceutical Fraternity, Incorporated – Delta Kappa Chapter</i> <ul style="list-style-type: none"><li>Conducted E-board and Chapter Meetings</li><li>Oversaw all facets of the organization's initiatives (i.e. Mentorship Program, Community Service)</li><li>Corresponded with Central Office to ensure the Chapter was meeting National requirements</li></ul>
Sept. 2016 – April 2018	<b>Co-Phoenix Chair</b> <i>Class of 2019 – Howard University College of Pharmacy</i> <ul style="list-style-type: none"><li>Produced several study guides and practice questions to aid course mates in the Class of 2019 with increased performance on exams</li><li>Led review sessions for students struggling with course material</li></ul>
Aug. 2017 – May 2018	<b>Lead Tutor</b> <i>Howard University College of Pharmacy</i> <ul style="list-style-type: none"><li>Recruited tutors for courses across all four years of the pharmacy program</li><li>Oversaw tutorial services and ensured that tutoring sessions were taking place according to a rotating weekly schedule</li></ul>
May 2016 – May 2017	<b>Vice President (Vice Regent)</b> <i>Kappa Psi Pharmaceutical Fraternity, Incorporated – Delta Kappa Chapter</i> <ul style="list-style-type: none"><li>Arranged and guided the progression of the KP-Pal mentoring initiative</li><li>Planned an entire week of events centered on highlighting Kappa Psi values, such as service, professionalism, scholarship and brotherhood</li></ul>
May 2016 – May 2017	<b>Chronic Kidney Disease (CKD) Co-Chair</b> <i>Student National Pharmaceutical Association (SNPhA) – Howard University College of Pharmacy</i> <ul style="list-style-type: none"><li>Collaborated with fellow CKD co-chair on events to engage both Howard students and the DC community at large on concerns related to chronic kidney disease</li></ul>

2016 – 2018

**Writer**

*Black Apothecary – Howard University College of Pharmacy*

- Authored articles about FDA approved drugs and stories pertaining to local events throughout the college

Aug. 2016 – May 2017 **Director of Professional Development**

*National Community Pharmacists Association (NCPA) – Howard University College of Pharmacy*

- Participated in NCPA's annual business plan competition and gained insight on the logistics of business planning
- Formulated the outline of a Financial Literacy Workshop that is geared towards helping students improve their financial skills both as a current student and as a soon-to-be health-care professional with potential business venture ideas

## COMMUNITY OUTREACH

---

Sept. 2018	Health Fair at Our Lady of Perpetual Help Church Washington, DC
April 2018	CCPMRC Health and Wellness Fair Washington, DC
Dec. 2017	Adopt A Child – Angel Tree Child Washington, DC
Sept. 2017	No Sew Blankets and Pillows for Victims of Hurricane Harvey Washington, DC
Oct. 2016	Health Screenings & Education at New Bethel Baptist Church Washington, DC
Oct. 2016	Chronic Kidney Disease Walk Washington, DC
Oct. 2016	Operation Immunization – Providing Flu Vaccines Veteran Affairs Medical Center, Washington, DC
Sept. 2016	Patient Tracking & Triaging National Museum of African American History and Culture Washington, DC
March 2016	Drug Abuse is Madness Campaign – APhA GenerationRx Initiative Washington, DC
Nov. 2015	Point of Dispensing CCPMRC Event Deanwood Recreation Center, Washington, DC

## AWARDS AND ACHIEVEMENTS

---

Dec. 2018	Finalists/HUCOP Representatives in Clinical Skills Competition <i>ASHP Midyear 2018</i>
Dec. 2017	Finalists/HUCOP Representatives in Clinical Skills Competition <i>ASHP Midyear 2017</i>

April 2017	Winner of SNPhA Clinical Skills Competition <i>Howard University College of Pharmacy (HUCOP) Local Chapter</i>
April 2017	Phi Lambda Sigma - Pharmacy Leadership Society
Feb. 2017	Rho Chi Honor Society
April 2016	1 <sup>st</sup> Place Winner of Interview Skills Competition <i>Howard University College of Pharmacy – ASHP</i>
Sept. 2015	National Institutes of Health (NIH) Scholarship <i>Howard University, College of Pharmacy</i>
Sept. 2011 – May 2015	Seinfeld Scholar – Jerry Seinfeld Scholarship Foundation

## **LICENSURE & CERTIFICATIONS**

---

October 2018	<b>Naloxone Trained</b> Howard University College of Pharmacy, Washington, DC
April 2018	<b>Cardiopulmonary Resuscitation (CPR) and Basic First Aid</b> <i>American Safety &amp; Health Institute</i>
June 2016	<b>Trained HIV Tester</b> <i>Kaiser Family Foundation</i>
April 2016	<b>Pharmacy based Immunization Certification</b> <i>American Pharmacists Association</i>
March 2016	<b>Pharmacy Intern License #PHI0811</b> <i>Washington, DC</i>

## **REFERENCES**

---

*Available Upon Request*

# Mark W. Sarlo

## EDUCATION

---

<b>Doctor of Pharmacy Candidate</b> West Virginia University, Morgantown, WV	Anticipated 2019
<b>Master of Business Administration</b> West Virginia University, Morgantown, WV	May 2018
<b>Master of Science Pharmacology</b> Thomas Jefferson University, Philadelphia, PA	July 2015
<b>Bachelors of Arts Biological Sciences</b> Rutgers University, New Brunswick, NJ	May 2012

## ADVANCED PHARMACY PRACTICE EXPERIENCE

---

<b>Long-Term Care</b> <b>VAMC Martinsburg</b> Martinsburg, WV Preceptor: Tim Kefauver, RPh <ul style="list-style-type: none"><li>Created and managed warfarin dosing for patients</li><li>Help develop new anticoagulation regimens for new and existing patients</li><li>Completed retrospective review and presented an in-service on antipsychotics in the elderly</li></ul>	March 2019-April 2019
<b>Pediatric and Neonatal Intensive Care</b> <b>WVU Medicine Longitudinal Track Program</b> J.W. Ruby Memorial Hospital; Morgantown, WV Preceptor: Jenni Shahan, PharmD <ul style="list-style-type: none"><li>Helped develop daily pharmacotherapy plans for neonatal patients</li><li>Recommended and monitored drug therapies for optimal patient care</li><li>Counsel parents on new outpatient medications</li></ul>	January 2019-February 2019
<b>Solid Tumor Ambulatory Care Oncology</b> <b>WVU Medicine Longitudinal Track Program</b> J.W. Ruby Memorial Hospital; Morgantown, WV Preceptor: Jordan Hill PharmD, BCOP and Crystal Heise PharmD, BCACP <ul style="list-style-type: none"><li>Recommended and adjusted chemotherapy plans</li><li>Developed patient guides for Neupogen, Neulasta, and Neulasta On-pro</li><li>Counseled patients on new and existing chemotherapy plans</li></ul>	November 2018-December 2018
<b>Pediatric Health System Pharmacy Practice</b> <b>WVU Medicine Longitudinal Track Program</b> J.W. Ruby Memorial Hospital; Morgantown, WV Preceptor: Kayla Dilcher, PharmD <ul style="list-style-type: none"><li>Developed a drug monograph on Genotropin Miniquick pens</li><li>Created Pharmacist and patient medication guides on Genotropin and Procrit</li><li>Recommended and monitored drug therapies for pediatric specialties consult services</li></ul>	October 2018-November 2018
<b>Cardiac Surgery</b> <b>WVU Medicine Longitudinal Track Program</b> J.W. Ruby Memorial Hospital; Morgantown, WV Preceptor: Galen Kabulski, PharmD, BCPS <ul style="list-style-type: none"><li>Rounded with Cardiac Surgery developing new patient treatments plans</li></ul>	September 2018-October 2018

- Recommended and managed daily Warfarin to achieve optimal INR levels in valve replacement
- Optimized and recommended antibiotic and pain management regimens for post-operative patients

### **Giant Eagle Pharmacy**

#### **Advanced Community Practice**

July 2018-August 2018

Morgantown, WV

Preceptor: Shanna Secreto, PharmD

- Assist in the preparation of medication orders and help pre-verify orders with the pharmacist
- Problem solved insurance and prior authorization issues in a timely manner

### **Clinical Pharmacology**

June 2018-July 2018

#### **Federal Drug Administration Center for Drug Evaluation and Research**

Silver Spring, MD

Preceptor: Islam Younis, PharmD, PhD, MS

- Researched the prevalence of hepatic and renal adjustments in FDA-approved biologics and biosimilars
- Analyzed and discussed antiretroviral investigational new drug applications with FDA staff

### **Cardiac Medicine**

May 2018-June 2018

#### **WVU Medicine Longitudinal Track Program**

J.W. Ruby Memorial Hospital; Morgantown, WV

Preceptor: Jessica Kanai, PharmD

- Developed therapeutic plans for patients with myocardial infarction, arrhythmias, and coagulopathies
- Answered drug information questions from attending physicians, cardiology fellows, and residents
- Counseled patients on new and existing home medications prior to discharge

## **INTRODUCTORY PHARMACY PRACTICE EXPERIENCE**

---

### **Introductory Professional Experience**

May 2016-June 2016

Jefferson Memorial Hospital, Ranson, WV

Preceptor: Jonathan Kline, PharmD

### **Introductory Professional Experience**

May 2016-June 2016

CVS Pharmacy, Fairmont, WV

Preceptor: David Layman, PharmD

## **WORK RELATED EXPERIENCE**

---

### **Pharmacy Intern**

June 2017-August 2017

Critical Care and Surgical Unit Division

Johns Hopkins Hospital

- Evaluated the prevalence of acyclovir-induced nephrotoxicity and its causative factors in a retrospective chart review
- Identified causative factors that increased busy times in Critical Care and Surgical Pharmacy
- Developed Johns Hopkins Hospital usage guidelines for Kovaltry, Idelvion, Adynovate, and Elocate
- Developed a comprehensive medication safety analysis for Critical Care and Surgery Pharmacy

### **Pharmacy Student Researcher**

September 2016-Present

Department of Pharmaceutical Sciences, Physiology, and Behavioral Medicine and Psychiatry

West Virginia University

- Sequence addiction related genes in buprenorphine patients and analyze pharmacogenomics differences
- Identify medications and over the counter products that modulate genetic and pharmacokinetic differences
- Co-authored a West Virginia University Clinical and Translational Science (CTSI) grant

### **Pharmacy Intern**

October 2015-Present

WVU Medicine Medical Center Pharmacy and Discharge Pharmacy

Morgantown, WV



- Assist in discharge pharmacy medication counseling
- Train and assist new pharmacy interns and technicians on outpatient and transitions of care
- Help create and revise new protocols for discharge pharmacy

**Pharmacy Technician**

October 2014-March 2015

Wegmans

Cherry Hill, NJ

- Received and filled prescription orders in a timely fashion
- Ordered and maintained storage and pharmaceutical order logs
- Communicated with insurance companies when validating new prescription and prescription plans

**Graduate Student**

April 2014-June 201

Master's thesis: *Expression of the ABCB1 transporter in the SOD1-G93A preclinical mouse model of Amyotrophic Lateral Sclerosis*

Thomas Jefferson University

Department of Neuroscience /Weinberg ALS Center

Philadelphia, PA

- Analyzed P-glycoprotein and breast cancer resistance protein expression patterns throughout disease progression in both mouse and post-mortem Amyotrophic Lateral Sclerosis tissue
- Researched different Amyotrophic Lateral Sclerosis causative mutations affecting P-glycoprotein and breast cancer resistance protein expression and activity on endothelial cells of the blood-spinal cord and blood-brain barrier
- Identified inducible pluripotent stem cell derived from sporadic Amyotrophic Lateral Sclerosis astrocytes regulating drug transporters expression on an in-vitro co-culture blood-brain barrier model

**Research Technician**

September 2013-March 2014

Thomas Jefferson University

Department of Neurosurgery and Cancer Biology

Philadelphia, PA

- Researched immune system infiltration into the brain in murine glioblastoma models
- Studied the pro-inflammatory effect of a novel oncolytic rabies vaccine for glioblastomas
- Researched the tumorigenicity of CD133<sup>+</sup> tumor stem cells in glioblastoma models

**Scientist I**

July 2012-May 2013

Sdix

Newark, DE

- Researched and developed new antibodies and immunoassays for production
- Performed small and large-scale purification of IgG antibodies according to GxP regulations
- Tested reactivity and specificity of antibodies using chemistry analyzers

**LEADERSHIP POSITIONS**

**Phi Lambda Sigma Luzzi Lecture Committee Co-Chair**

November 2016-Present

- Organize and create budgets and itineraries for guest speakers
- Managed six to eight students to recruit guest speakers

**West Virginia University School of Pharmacy Curriculum Committee**

September 2016-Present

- Help modify, rewrite, and approve new curriculum for future classes
- Develop future new rules and regulations for West Virginia School of Pharmacy

**Circa Terra Pharmacy Representative**

September 2016-Present

- Collect unused medical supplies for third world countries

**West Virginia University Health Science Center Wellness Committee**

January 2016-Present

- Pharmacy student liaison for Health Sciences Center

**Kappa Psi Graduate Relations Committee**

November 2015-Present

- Initiate and develop contact with alumni for program development

**Class of 2019 Academic Officer**

September 2015-Present

- Help mediate student academic conflicts with school administration
- Created Class of 2019 tutoring positions for students to succeed academically
- Manage, regulate, and oversee student volunteer tutors
- Amassed over 350+ tutoring hours for students

**West Virginia University School of Pharmacy Presidents Council**

September 2017-May 2018

- Develop future pharmacy school organization plans
- Mediate conflict between student organizations

**American Pharmacist Association-Association of Student Pharmacists President**

May 2017-May 2018

- Increased membership by 30% by including new pre-pharmacy and pharmacy students
- Increased organization bank account by \$2,500 over six months
- Fundraised for six students to attend Annual APhA-ASP meeting

**Students for Global Health Pharmacy Representative**

September 2016-May 2018

- Representative for pharmacy students interested in global health

**West Virginia Pharmacist Association Student Representative**

September 2016-May 2017

- Help develop new plans and ideas to increase membership

**American Pharmacist Association-Association of Student Pharmacists President-Elect**

August 2016-May 2017

- Maintain and organize Pre-Pharmacy buddy program and mock interviews
- Educate Pre-Pharmacy students about pharmacy
- Plan monthly meetings and volunteering activities

**Industry Pharmacist Organization Co-founder and President**

May 2016-May 2017

- Developed a new student chapter for West Virginia University
- Organized and planned Pharmaceutical company tours and guest speakers

---

**TEACHING EXPERIENCE****Class of 2019 Volunteer Teaching Assistant**

October 2015-Present

**Teacher's Assistant**

September 2011-May 2012

Integrative Physiology

Endocrinology

Systems Physiology

Professors Dr. JP Advis, DVM/PhD and Dr. Andre Pietrzykowski, MD/PhD

---

**PUBLICATIONS**

Qosa H, Lichter J, **Sarlo M**, Markanadiah S, McAvoy K, Richard JP, Jablonski M, Maragakis N, Pasinelli P, Trotti D. Astrocytes drive upregulation of the multidrug resistance transporter ABCB1 in endothelial cells of the blood-brain barrier in mutant superoxide dismutase 1-linked amyotrophic lateral sclerosis. *Glia* 2016 Aug;64(8):1298-313. doi:10.1002/glia.23003

---

**POSTERS**

Nutter S, **Sarlo M**, Azuonwu A, Greig E, Burnette J, Lee A, Brooks S, Lander L, Berry J, Setola V, Siderovski D, Galvez-Peralta M. Characterization of Substance Abuse in the Comprehensive Opioid Addition Treatment Clinic (COAT). Presented at West Virginia University Van Lier Research Day, March 2018

**Sarlo M**, Merola D, Farrokh S, Puttgen H, Lewin J. Safety considerations of acyclovir use in a tertiary care center: A retrospective chart review. Presented at ASHP Midyear Regional Meeting, December 2017

## **PRESENTATIONS**

<b>Tetralogy of Fallot</b> WVU Medicine Morgantown, WV	October 2018
<ul style="list-style-type: none"> <li>Presented to: WVU Medicine Pediatric Pharmacy</li> </ul>	
<b>Mitral Valve Disease</b> WVU Medicine, Morgantown, WV	October 2018
<ul style="list-style-type: none"> <li>Presented to WVU Medicine Critical Care Pharmacy</li> </ul>	
<b>Rivaroxaban in Patients with Heart Failure, Sinus Rhythm, and Coronary Disease</b> (COMMANDER-HF trial) WVU Medicine, Morgantown, WV	September 2018
<ul style="list-style-type: none"> <li>Presented to: WVU Medicine Critical Care Pharmacy</li> </ul>	
<b>Atrial Fibrillation</b> WVU Medicine, Morgantown, WV	June 2018
<ul style="list-style-type: none"> <li>Presented to: WVU Medicine Internal Medicine Pharmacy</li> </ul>	
<b>Ticagrelor versus Clopidogrel After Fibrinolytic Therapy in Patients With ST-Elevation Myocardial Infarction (TREAT trial)</b> WVU Medicine, Morgantown, WV	June 2018
<ul style="list-style-type: none"> <li>Presented to: WVU Medicine Cardiology Pharmacy</li> </ul>	
<b>Vasopressors usage in Cardiology</b> WVU Medicine, Morgantown, WV	June 2018
<ul style="list-style-type: none"> <li>Presented to: WVU Medicine Cardiology Gold Service</li> </ul>	
<b>Assessment of Pharmacy Staff Opinions of Workload and Contributing Factors</b> Johns Hopkins Hospital, Baltimore, MD	July 2017
<ul style="list-style-type: none"> <li>Presented to: Johns Hopkins Hospital Pharmacy Staff and Administration</li> </ul>	
<b>Parenteral anticoagulation usage in Jefferson Memorial Center</b> Jefferson Medical Center, Ranson, WV	June 2017
<ul style="list-style-type: none"> <li>Presented to: Jefferson Medical Center Pharmacy Staff</li> </ul>	
<b>Clinical trials as Research Tool</b> West Virginia University School of Pharmacy, Morgantown, WV	February 2017
<ul style="list-style-type: none"> <li>Presented to: Research in the Pharmaceutical Sciences (PHAR836)</li> </ul>	
<b>Clinical trials as Research Tool</b> West Virginia University School of Pharmacy, Morgantown, WV	September 2015
<ul style="list-style-type: none"> <li>Presented to: Introduction to Research (PHAR704)</li> </ul>	
<b>Expression of the ABCB1 transporter in the SOD1-G93A preclinical mouse model of Amyotrophic Lateral Sclerosis</b> West Virginia University School of Pharmacy, Morgantown, WV	September 2015
<ul style="list-style-type: none"> <li>Presented to: Introduction to Research (PHAR 704)</li> </ul>	
<b>Expression of the ABCB1 transporter in the SOD1-G93A preclinical mouse model of Amyotrophic Lateral Sclerosis</b> Thomas Jefferson University, Philadelphia, PA	July 2015
<ul style="list-style-type: none"> <li>Presented to: Thomas Jefferson University Graduate School Committee</li> </ul>	

## PROFESSIONAL AND STUDENT ORGANIZATIONS

Community Action Team Accelerating Learning for Youth Science and Technology	November 2017-Present
Maryland Society of Health-System Pharmacy	April 2017-Present
Phi Lambda Sigma	September 2016-Present
College of Psychiatric and Neurologic Pharmacists	July 2016-Present
Industry Pharmacists Organization	May 2016-Present
Kappa Psi	November 2015- Present
American Pharmacist Association-Association of Student Pharmacists	August 2015-Present
American Society of Health-System Pharmacists	August 2015-Present
Student Society of Health-System Pharmacy	August 2015-Present
Circa Terra	August 2015-Present
Rural Health Interest Group	August 2015-Present

## AWARDS AND HONORS

The West Virginia University School of Pharmacy Excellence in Pharmacy and Business Scholarship	May 2018
Dean's List	May 2017
West Virginia University-Peking University Business Case Competition 1 <sup>st</sup> Place	May 2017
Patricia and Jim Chase Pharmacy Endowed Scholarship	April 2017
President's Volunteer Service Award	March 2017
American College of Clinical Pharmacy West Virginia Clinical Research Challenge 1 <sup>st</sup> Place	February 2017
Deans List	May 2016
The Academy of Student Pharmacists Scholarship	April 2016
President's Volunteer Service Award	March 2015
Phi Lambda Sigma Member of the Month	November 2015
Kappa Psi Member of the Month	October 2015
American Pharmacist Association Member of the Month	September 2015

## VOLUNTEER ACTIVITIES

<b>Community Action Team Accelerating Learning for Youth Science and Technology</b>	November 2017- Present
• Educate fifth and sixth grade students about concussions, neuroscience, and drug abuse	
<b>Circa Terra</b>	September 2016-Present
• Collect and sort medical supplies for third world countries	
<b>Harrison County Health Fair</b>	June 2016-Present
• Provide Diabetes education and glucose screenings to Harrison Power employees	
<b>WVU Children's Health Fair</b>	September 2015-Present
• Educate about healthy eating, diabetes awareness, and differentiating between candy and medication	
<b>Rosenbaum House</b>	September 2015-Present
• Cook and clean for hospital patients	
<b>WVU Medicine Health Exposition</b>	September 2015-Present
• Educate and test blood glucose and blood pressure for the Morgantown residents	
<b>World AIDS Day</b>	November 2015-Present
• Spread awareness about AIDS to the local college community	
<b>Marion County Health Fair</b>	September 2015-Present
• Test blood sugar and blood pressure for residents of Marion County	
<b>West Virginia School of Pharmacy Interview Tour Guide</b>	September 2015-Present
• Educate pre-pharmacy candidates about West Virginia School of Pharmacy	
• Help run a chap stick compounding lab for high school pre-pharmacy candidates	
<b>West Virginia Legislature Day</b>	February 2018
• Educated West Virginia Senate about Naloxone usage and current legislature	
<b>American Cancer Society Hope Lodge</b>	June 2017
• Cooked meals for patients who were lodging during treatments	

## LICENSES AND CERTIFICATIONS

Maryland Pharmacy Intern License ID: PI0118  
West Virginia Pharmacy Intern License ID: IN0008005  
American Pharmacists Association Medication Therapy Management certification  
American Pharmacists Association Vaccination certification  
American Pharmacists Association Diabetes care certification  
American Heart Association CPR and AED certification

April 2017-Present  
September 2015 -Present

#### **MEETINGS ATTENDED**

---

American Pharmacists Association Annual Meeting	March 2018
America Society of Health-System Pharmacists Midyear Clinical Meeting	December 2017
American Pharmacists Association Midyear Regional Meeting	November 2017
Maryland Society for Health-System Pharmacists Student Leader Workshop	July 2017
American Pharmacists Association Midyear Regional Meeting	October 2016
American Pharmacists Association Annual Meeting	March 2016

# Neha Poladi, PharmD

Address: 555 West 80<sup>th</sup> St, New York, NY 10021  
Phone: 555-555-5555 | Email: john.doe@gmail.com

---

## EDUCATION AND TRAINING

<b>PGY-1 Pharmacy Practice Residency</b> NewYork-Presbyterian Hospital Residency Program Director: Corey Witenko, PharmD, BCPS, BCCCP	Jul 2019 – Present
<b>Doctor of Pharmacy</b> University of Pittsburgh School of Pharmacy Magna Cum Laude	Aug 2015 – Apr 2019
<b>Pharmacotherapy Scholars Area of Concentration</b> ( <a href="http://scholars.pharmacy.pitt.edu">http://scholars.pharmacy.pitt.edu</a> ) University of Pittsburgh School of Pharmacy Program Directors: James Coons, PharmD, FCCP, BCCP & Neal Benedict, PharmD, BCPS	Nov 2016 – Apr 2019
<b>BS Pharmaceutical Sciences</b> <b>Minor in Economics</b> University of Pittsburgh Dietrich School of Arts & Sciences Summa Cum Laude	Aug 2013 – Apr 2017

---

## LICENSURE

<b>New York Pharmacist License</b> , License Number 066197	Oct 2019 – Present
--	--------------------

---

## CERTIFICATION

<b>Collaborative Institutional Training Institute (CITI)</b> , Biomedical Research	Jul 2018 – Present
<b>Basic Life Support</b> , American Heart Association	Feb 2018 – Present
<b>Pharmacy Based Immunization Delivery</b> , American Pharmacists Association	Aug 2017 – Present

---

## PROFESSIONAL WORK EXPERIENCE

<b>Pharmacy Intern</b> UPMC Presbyterian-Shadyside, Pittsburgh, PA Preceptor: Cara Mazzarisi, PharmD	Aug 2016 – Apr 2018
<b>Pharmacy Intern</b> CVS/Pharmacy #4133, Pittsburgh, PA Preceptor: Kathryn Conifer, PharmD	Sep 2015 – Aug 2016

---

## PGY-1 PHARMACY PRACTICE RESIDENCY LONGITUDINAL EXPERIENCES

Pharmacokinetic Therapeutic Drug Monitoring  
St. John's University Teaching Certificate Program  
Satellite Pharmacy Operations  
HIV Telemedicine Clinic  
Stroke Code Response

## PGY-1 PHARMACY PRACTICE RESIDENCY ROTATIONS

---

### COMPLETED

<b>Cardiothoracic ICU</b> Preceptor: Audrey Littlefield, PharmD, BCPS, BCCCP	Mar – Apr 2020
<b>Practice Management</b> Preceptor: Leigh Efird, PharmD, BCPS	Feb – Mar 2020
<b>Neonatal ICU</b> Preceptor: Dimitri Savva, PharmD, BCPS	Jan – Feb 2020
<b>Drug Information</b> Preceptor: Mary Giouroukakis, PharmD	Nov – Dec 2019
<b>Infectious Diseases</b> Preceptor: Angela Loo, BCPS (AQ-ID)	Oct – Nov 2019
<b>Solid Oncology</b> Preceptor: Michelle Nguyen, PharmD	Sep – Oct 2019
<b>Internal Medicine</b> Preceptor: Jessica Snead, PharmD, BCPS, BCGP	Aug – Sept 2019

### ANTICIPATED

<b>Oncology Administration</b> Preceptor: Raja Bhatt, PharmD, BCOP	May – Jun 2020
<b>Liver Transplantation</b> Preceptor: David Salerno, PharmD, BCPS	Apr – May 2020

## SELECT ADVANCED PHARMACY PRACTICE EXPERIENCES

---

<b>Surgical ICU</b> Hospital of the University of Pennsylvania, Philadelphia, PA Preceptor: Jamie Grey, PharmD, BCCP, BCCCP	Mar – Apr 2019
<b>Pediatric ICU</b> Children's Hospital of Pittsburgh, Pittsburgh, PA Preceptor: Kelli Crowley, PharmD, BCPS	Jan – Feb 2019
<b>Neurologic ICU</b> Cleveland Clinic Main Campus, Cleveland, Ohio Preceptor: Jessica Biedny, PharmD, BCCCP	Sep – Oct 2018
<b>Solid Oncology, Lymphoma, Leukemia</b> UPMC Shadyside Cancer Center, Pittsburgh, PA Preceptor: Jerry Mascara, PharmD, BCOP	Aug – Sep 2018
<b>Internal Medicine</b> UPMC McKeesport Hospital, Pittsburgh, PA Preceptor: Rebecca Morcheid, PharmD	Jul – Aug 2018
<b>Geriatric Clinic</b> UPMC Senior Care Center & Benedum Geriatric Institute, Pittsburgh, PA Preceptors: Erin Suhrie, PharmD, BCPS; Christine Ruby-Sclesi, PharmD, BCPS	May – Jun 2018

## RESEARCH EXPERIENCES

---

<b>Incidence of Anemia among Dapsone-Treated Kidney Transplant Recipients without G6PD Deficiency</b> NewYork-Presbyterian Hospital Co-Investigators: Nicholas Lange, PharmD, BCPS; Jessica Hedvat, PharmD	Jul 2019 – Present
<b>Optimizing the Transition from Patient-Controlled Analgesia (PCA) to Oral Opioids</b> NewYork-Presbyterian Hospital Co-Investigators: Catherine Johnson, PharmD; Peter Campbell, PharmD, BCOP; Christian Thomas, PharmD, BCOP	Jul 2019 – Present
<b>Impact of Pharmacogenetics on the Potential Interaction between Clopidogrel and Proton Pump Inhibitors</b> University of Pittsburgh School of Pharmacy Co-Investigator: James Coons, PharmD, FCCP, BCCP	Jan 2018 – Jan 2019
<b>Prophylactic Levofloxacin during High-Risk Neutropenia in Pediatric Leukemia and Hematopoietic Stem Cell Transplant (HSCT) Recipients</b> University of Pittsburgh Schools of Pharmacy & Medicine Co-Investigator: Denise Howrie Schiff, PharmD, BCPS	Jan 2017 – Dec 2017

## ABSTRACT AND POSTER PRESENTATIONS

---

<b>Johnson C, PharmD, Poladi N, PharmD, et al.</b> <i>Optimizing the transition from patient-controlled analgesia (PCA) to oral opioids</i> ASHP Midyear Clinical Meeting, Las Vegas NV	Dec 2019
<b>Kamp A, PharmD, Dubrawka C, PharmD, Jennings L, PharmD, Poladi N, PharmD, et al.</b> <i>Impact of pharmacogenetics on the potential interaction between clopidogrel and proton pump inhibitors</i> ASHP Midyear Clinical Meeting, Anaheim CA	Dec 2018
<b>Poladi N, PharmD, Howrie-Schiff D, PharmD, Green M, MD et al.</b> <i>Prophylactic levofloxacin during high-risk neutropenia in pediatric leukemia and hematopoietic stem cell transplant recipients</i> ASHP Midyear Clinical Meeting, Orlando FL	Dec 2017

## PRESENTATIONS

---

### ACPE ACCREDITED PRESENTATIONS

<b>The Effect of Cannabidiol on Drop Seizures in Lennox-Gastaut Syndrome</b> UPMC St. Margaret's Hospital Audience: clinical pharmacists, pharmacy residents, pharmacy students	Jul 2018
<b>Treatment of Paraneoplastic Cushing's Syndrome in Metastatic Small Cell Lung Cancer</b> UPMC St. Margaret's Hospital Audience: clinical pharmacists, pharmacy residents, pharmacy students	Jul 2018

### CASE PRESENTATIONS

<b>Management of Metstatic Adrenocortical Carcinoma</b> NewYork-Presbyterian Hospital Audience: clinical pharmacists, pharmacy residents, pharmacy students	Jan 2020
---	----------



## JOURNAL CLUBS

- Comparative Effectiveness of Exclusive Exposure to Nafcillin or Oxacillin, Cefazolin, Piperacillin/Tazobactam, and Fluoroquinolones Among a National Cohort of Veterans with Methicillin-Susceptible *Staphylococcus aureus* Bloodstream Infection** Nov 2019  
NewYork-Presbyterian Hospital  
Audience: clinical pharmacists, pharmacy residents, pharmacy students
- Enzalutamide with Standard First-Line Therapy in Metastatic Prostate Cancer** Sep 2019  
NewYork-Presbyterian Hospital  
Audience: clinical pharmacists, pharmacy residents, pharmacy students
- Implementation of a Risk-Stratified Opioid Weaning Protocol in a Pediatric Intensive Care Unit** Jan 2019  
Children's Hospital of Pittsburgh  
Audience: clinical pharmacists, pharmacy students
- Atezolizumab and Nab-Paclitaxel in Advanced Triple-Negative Breast Cancer** Nov 2018  
University of Pittsburgh School of Pharmacy  
Audience: clinical pharmacists, pharmacy students

## SEMINARS

- Acute Ischemic Stroke** Mar 2020  
NewYork-Presbyterian Hospital  
Audience: clinical pharmacists, pharmacy residents, pharmacy students
- Cystic Fibrosis** Oct 2019  
NewYork-Presbyterian Hospital  
Audience: clinical pharmacists, pharmacy residents, pharmacy students
- Journal Club and Literature Evaluation** Oct 2019  
NewYork-Presbyterian Hospital  
Audience: clinical pharmacists, pharmacy residents, pharmacy students
- Pirfenidone in Patients with Idiopathic Pulmonary Fibrosis** Apr 2018  
University of Pittsburgh School of Pharmacy  
Audience: clinical pharmacists, pharmacy residents, pharmacy students

## MISCELLANEOUS

- Crizanlizumab Drug Monograph** Dec 2019  
NewYork-Presbyterian Hospital  
Audience: Formulary and Therapeutics Committee; clinical pharmacists, physicians
- Vasopressors and Inotropes** Oct 2018  
Cleveland Clinic Main Campus  
Audience: critical care clinical pharmacists, pharmacy students
- Analgesia, Sedation, and Delirium** Oct 2018  
Cleveland Clinic Main Campus  
Audience: critical care clinical pharmacists, pharmacy students
- Moxetumumab Drug Monograph** Sep 2018  
UPMC Shadyside UPMC Shadyside  
Audience: oncology clinical pharmacists, pharmacy students
- Binimetinib and Encorafenib Drug Monograph** Sep 2018  
UPMC Shadyside  
Audience: oncology clinical pharmacists, pharmacy students

## TEACHING EXPERIENCES

---

<b>Diabetes Lecture Series</b> UPMC McKeesport Hospital Faculty Coordinator: Nicole D'Antonio, PharmD	Aug 2018
<b>Simulation Case Development</b> University of Pittsburgh School of Pharmacy Faculty Coordinator: Pamela Smithburger, PharmD, MS, BCPS	Jan 2018 – Apr 2018
<b>Advanced Pulmonary Disease Elective Course Development</b> University of Pittsburgh School of Pharmacy Faculty Coordinator: Christopher Ensor, PharmD, BCPS	Aug 2017 – Dec 2017

## PROFESSIONAL ORGANIZATION EXPERIENCES

---

<b>Student National Pharmaceutical Association (SNPhA)</b> Chronic Kidney Disease Initiative Chair	Aug 2016– Apr 2018
<b>Student College of Clinical Pharmacy (SCCP)</b> Treasurer	Mar 2016– Apr 2018
<b>Kappa Psi Pharmaceutical Fraternity</b> Fundraising Chair Patient Care Chair	Mar 2016– Apr 2018

## HONORS AND AWARDS

---

<b>Dean's List (10 out of 10 semesters),</b> University of Pittsburgh	Dec 2013 – May 2018
<b>University Honors College Scholarship,</b> University of Pittsburgh	Apr 2016 & Apr 2017

# **Interview Preparation Materials**

# INTERVIEW PREP 101

---

## PRIOR TO INTERVIEW

- **Research residency programs** and have questions prepared that cannot be answered by the program website or pamphlet.
- **Look at agenda for the interview** and have specific questions for each interview session (especially with the director of the program). Perform a background search on the interviewers so that if you have extra time you can ask them specific questions about their background or job. Also look at the agenda to see if they will require a written test or presentation. Look at the residency director closely. ( i.e. how long have they been director? what is their practice area? where did they train?)
- **Have a professional portfolio** (leather) notebook to take with you on interviews, so that you can keep your extra copies of resumes, pen, and paper for notes in one location.
- **Review your CV.** Interviewers may ask you about anything that you have placed on your CV.
- **Practice answering questions**, with friends or in front of a mirror. You never know what you are going to say until you have to actually say the words. Make a list of 4 accomplishments that you have enjoyed. Think of 2 large decisions you have made recently and be able to describe how you made those decisions.
- **Preparing for interviews out of state:** Plan travel arrangements to and from the airport, coordinate a place to keep your luggage during the interview, find a hotel that is close to the hospital, figure out transportation to and from the hospital. Make sure you know where the interviewing site is located and how long it takes to get there.

## DAY OF INTERVIEW

Remember, you are qualified for this position but you will not get it unless you nail the interview! This is your chance to show them that you know what a residency is, you're definitely interested in their particular program, you're highly motivated, you work well with others, and you have a clinical mind. Just about everyone gets asked a question that they are not ready for. If you get asked the same question throughout the day, answer it as if it is the first time you have been asked it. Try not to answer just "yes" or "no" to questions, you want to make it a conversation and let them know as much about you as you possibly can in the short period of time that you have.

- Dress professionally: suit, closed-toed shoes, minimal jewelry, NO gum
- Turn cell phone OFF (vibrate can still be heard during the interview)
- Plan to arrive 15 minutes early. Do NOT be late!
- Lunch or downtime with the current residents is still considered part of the interview! Watch what you say. This is a great time to ask questions about the program...ex.
  - do you hang out together as a group
  - how often do you interact with the resident director
  - What are your thoughts on how pharmacy is received in this hospital
  - If you could change something about the program, what would that be
- Write down notes after each interview so that you remember everything about the program and so that you have ideas to personalize a thank you note

## AFTER THE INTERVIEW

- Write a "hand-written" thank you note to the interviewers (especially the program directors). These are best if written the DAY OF the interview and mailed out. Just make sure that you send a thank you note (email/handwritten) to EVERYONE who took the time to interview you.
- If you decide not to participate in the Match, contact the programs to let them know

## **SAMPLE QUESTIONS**

### **...TO ASK ON AN INTERVIEW**

Good to have written down prior to the interview and bring them with you. When they ask if you have any questions, **YOU HAVE TO ASK QUESTIONS.**

- What are some of the former residents doing now?
- Are there any teaching/precepting opportunities? (ask if not on the website, if on website may ask for them to elaborate on the experience)
- Tell me a project a current resident is working on.
- What makes your program unique or successful?
- Describe your typical day at work. Do you have any interactions with the residents?
- What is your favorite part about your job?
- What made you get involved in the residency process?
- How do expectations change for a student on rotation to a resident on rotation?
- What organizations are you involved with (is your involvement suspected)?
- How flexible are rotation schedules? Can I change rotations that have been scheduled in the spring?
- How easy is it to get a desired elective rotation?
- Are there any opportunities to publish? How about outside of my research project?
- How are residents evaluated during the program?
- Has the pharmacy and residents ever worked with the medical department on research projects?
- What is the current pharmacy model? Are there any changes for the future?
- What clinics are available during the ambulatory care rotation (if not available on website)?
- Are there opportunities for leadership development?
- Have there been any significant changes in the residency program this year? Are there any changes planned for next year?
- What is the vision for the pharmacy department?

### **...HAVE BEEN ASKED DURING AN INTERVIEW**

- What made you interested in this program?
- What made you want to do a residency
- Tell me about yourself (have a summary prepared)
- What drove you to the profession of pharmacy
- Tell me about a time you impacted a patient's healthcare
- What is your biggest strength (don't just say it...elaborate on how it will help you with the residency)
- What are some of your weaknesses (don't just say it! Elaborate on how different aspects of their program will help you to work on this weakness or state how you consider this a weakness but it is also a strength....always put a positive spin on this!)
- Tell me about the hardest job you have had to perform
- Tell me about a time you did work you didn't find valuable and how you dealt with this
- Where do you see yourself in 5 years? 10 years?
- Are you a team player?
- What was your least favorite rotation and why?
- Tell me about a time when your carefully laid plans were fouled up. How did you react? What happened?
- Describe how you scheduled your time on an unusually hectic day. Give a specific example.
- If you had to live your life over again, what would you change?

- How has your education prepared you for your career?
- What is your least favorite aspect of where you work now?
- What do you think is the biggest issue facing pharmacy today?
- Have you done anything to improve yourself this past year? What?
- Have you read something that's changed your life?
- If you were stranded on a deserted island, what two drugs would you take with you?
- What do you like to do in your free time?
- What else do you think that I should know about you?
- Why do you think that you deserve the position?
- So, what questions do you have for me? (this has been asked at the beginning of an interview by a program director, be prepared to fill some time with questions)
- Describe what you do to 'keep up with the literature' and tell me a me about a recent paper you've read or a presentation you have attended
- What was your most rewarding moment during your job/experience/rotation/etc?
- What would your coworkers say about you?
- Who among all your teachers and mentors has had the most influence on you and why?
- What situation, in our current position, do you wish you had handled differently?
- Give me an example of a conflict you have encountered on your rotations and what you did to resolve that conflict?
- Some of your preceptors will not have PharmD degrees, do you have any issues taking directions from someone with a lesser degree?
- Give me an example of a leadership project or position you have been in?
- Give me an example of a team situation you have worked in, what was your role within the team, and did you experience any conflicts?
- I see from your CV you have done a presentation about \_\_\_\_\_, what can you tell me about \_\_\_\_\_?
- (if person is male) Would you have issues taking directions from a female?
- (if late in the interview day) What has surprised you about this site or residency program so far now that you are onsite?
- What was your favorite non-pharmacy job, and why?
- What was your favorite and least favorite rotation, and why?
- We all have to bend the rules at one time or another. Give me an example of when you had to bend the rules and how you handled the situation.
- Give me an example of an instance where you disagreed with how the team handled a specific problem and how you handled the situation
- Tell me why I should choose you over your peers for this residency.
- Why have you selected this institution? And, what do you think you will bring to our program?

Materials referenced here have been adapted from "Residency Prep 101: What to Do While You are Still in Pharmacy School" presented by Dr. Shannon Holt at the ACCP ESCP International Congress on Clinical Pharmacy in Orlando, Florida on April 26. 2009.

## Residency Interview Prep Session

### Station 1:

- Tell me a little bit about yourself
- Time management is a big part of being successful in residency. Describe a time when you had multiple deadlines or responsibilities and how you handled it.
- How do you build good working relationships with co-workers/teammates?
- How do you stay motivated when you have a lot of work to do?
- Tell me about a time you had a conflict and how you resolved it
- What three adjectives would your preceptors use to describe you?
- Describe the qualities of an effective preceptor you have had.
- How do you see your role changing from rotations to residency?
- A patient with a PE is started on warfarin 10 mg. What else would you want to know about the patient to determine if this dose is appropriate?
  - Follow-up: The INR comes back at 1.8 after one dose of 10mg. What do you do?  
How do you communicate this to another provider?
- If you could be any (drug/animal/tree) what would you be and why
- What excites you the most about the future of our profession?
- Provide a chance for the student to ask you (interviewer) questions → ie, “What questions do you have for me?”

Station 2:

- Tell me a little bit about yourself (optional—will be asked at station 1 but it may be good to give them more practice/your opinion)
- Describe two of your strengths and two of your weaknesses
- Tell me about a time a provider did not take your recommendation and how you handled it
- Do you work better in a team or on your own?
- Tell me about any recent constructive feedback you have received from your preceptor(s) and how you handled it
- Describe a stressful time during your rotations and how you got through it.
- What do you like to do for fun?
- What is the most significant impact you have had on a patient?
- What do you hope to gain from a residency program (or “how will you measure success during your time as a resident”)?
- What is an accomplishment that you are most proud of?
- What do you think is the biggest issue facing pharmacy today?
- Provide a chance for the student to ask you (interviewer) questions → ie, “What questions do you have for me?”



Station 3:

- Tell me a little bit about yourself (optional—will be asked at station 1 but it may be good to give them more practice/your opinion)
- Tell me about a mistake you made
- Tell me about a time you had to motivate others
- What factors do you consider in answering the following question, and what drug information resources would you use to gather more information?
  - An oncology patient is using an herbal supplement to treat their pain **OR** a pregnant patient with a penicillin allergy presents with a UTI.
- Describe a time you went above and beyond for a patient
- Tell me about a project that required a lot of planning and organization and how you handled it
- Tell me about a time you were in an ethical dilemma and how you handled it (ex: maybe had to break the rules) (can be pharmacy or non-pharmacy related)
- Tell me about a time when you had to work in a group with someone with whom you did not get along
- What was the most difficult and demanding task you had to complete this year?
- What is an area other than clinical knowledge that you hope to improve in through residency?
- Provide a chance for the student to ask you (interviewer) questions → ie, “What questions do you have for me?”

Station 4:

- Tell me a little bit about yourself (optional—will be asked at station 1 but it may be good to give them more practice/your opinion)
- Who is your biggest role model and why?
- Tell me about a time a provider did not take your recommendation and how you handled it
- Are you more detail-oriented or big picture? Follow-up: Tell me about a time being too [detail-oriented/big picture] had a negative outcome.
- What are three adjectives that your best friend would use to describe you? Your colleague? A stranger?
- How would you handle a situation where you had multiple projects due in one day and you could not possibly finish all of them?
- How do you build good working relationships with co-workers and teammates?
- Tell us about your relationship with a mentor.
- Where do you see yourself 5 years from now?
- What do you like to do for fun?
- Provide a chance for the student to ask you (interviewer) questions → ie, “What questions do you have for me?”

## General Residency Questions

**\*\*Use if you run out of questions at your station!**

### Questions About Me

- Why pharmacy?
- Why residency?
- What are your practice areas of interest? Why?
- What career would you choose if you could not do pharmacy?
- What is your meaning of personal and professional success?
- How would you define integrity?

### Goals

- What are your career goals? Where do you see yourself 3-4 years from now?
- Tell us about your short-term and long-term goals. Where do you see yourself in 2 years? Where do you see yourself in 5 years?
- What are your short-term career goals and how is our program a good fit to help you reach them?
- What are your 3-5 year career goals?
  - What qualities do you possess that you believe make you well suited for these goals?
  - How would our program help you achieve these goals?
  - What do you see as challenges to achieving these goals?
- What is one of your goals (could be personal or professional) and how do you think you are doing in terms of accomplishing that goal?
- What area other than knowledge would you like to grow in professionally?
- What is a non-professional goal that you have yourself?

### Working with Others

- How do you build a good working relationship with co-workers/teammates?
- How do you build trust and rapport with coworkers, patients, etc?
- How do you work with others?
- When working in a group and presented a project, what role do you tend to take?
- Are you an extravert or introvert? How do you see yourself working with the opposite?
- Do you work better in a team or on your own?

### Strengths/Weaknesses

- What are qualities that make you a good candidate?
- Why should we select you over the other candidates?
- What are two things that you would like us to remember about you?
- What are two of your strengths and two of your weaknesses?
- What is one of your greatest strengths? Give me an example of a time you displayed this.
- What is one of your weaknesses that is not clinical (soft skills)?

- Are you more detail-oriented or big picture? Follow-up: Tell me about a time being too [detail-oriented/big picture] had a negative outcome.
- What is your favorite quality about yourself?
- What is one thing you wish you could change about yourself?
- Who are your biggest cheerleaders?
- What do you like to do for fun?
- What frustrates you?
- What are 3 words you would use to describe yourself?
- What are 3 words your best friend would use to describe you?
- What are 3 words your family would use to describe you?  
(I had all 3 of these questions in a row- I was prepared to give 3 words about myself, but providing 9 different words was unexpected and challenging).
- What are three adjectives that your best friend would use to describe you? Your colleague? A stranger?
- What are 2 things in your life that have contributed to your success today?
- What is a misconception your friends or family have about you?

#### **Profession**

- What does clinical pharmacist mean to you?
- What excites you about the future of our profession?
- What makes you apprehensive about the future of our profession?
- What is an issue facing the profession that you care about and how did you learn about it?
- What is the latest pharmacy article that you have read that was not an assignment for a rotation?

#### **Feedback**

- What is one big piece of feedback you received that you have implemented?
- What is an example of feedback you provided to an organization or rotation site that was implemented?

#### **Mentors**

- Who is someone that has had a great influence on you?
- Who inspires you?
- What are qualities that one of your mentors has that you wish more people had?
- Describe the qualities of an effective preceptor you had.
- Describe your relationship with a mentor.

#### **Work Ethic**

- How would you handle a situation where you had multiple projects due in one day and you could not possibly finish all of them?
- How do you stay motivated when you have a lot of work to do?
- What is a project you've worked on that you're proud of? What 2-3 concepts did you learn from this project?

- How do you stay organized? How do you stay on track with day to day versus longitudinal tasks?
- How do you balance personal and professional obligations?

### **School/Leadership**

- Do you prefer to be a leader or a follower?
- What was the most difficult decision you had to make during pharmacy school?
- What in your curriculum or work experience has been unexpectedly easy? What has been more difficult than you anticipated?
- Describe a leadership role that you held outside of pharmacy and skills that you learned from it that will help you in pharmacy.
- Tell us about a project that required a lot of planning and organization and how you handled it.
- If you could go back, what is one thing you would have changed about your pharmacy school experience?
- What is an accomplishment from your pharmacy school training that you are most proud of?

### **Miscellaneous**

- Tell us about a session that you attended at Midyear.
- When was the last time you broke a policy or procedure?
- When was the last time you did something nice for someone that was not pharmacy related?
- What do you do to relieve stress?
- If you could move anywhere in the world, where would you move?
- What are you reading right now?
- What cereal best describes you and why?
- What animal are you?
- If you could pick any cereal box mascot to be president, what mascot would you pick and why?

### **Application Related Questions**

- Tell us about these presentations on your CV (interviewers chose two) – explain who the audience was and the main take-away points of presentation.
- Tell me about the poster you presented at Midyear. How many patients were included in your research? What were the results? (Be prepared to answer specific questions about your research.)
- What is important for me to know from your CV?
- What is something I wouldn't know about you from reading your CV?
- What is an accomplishment you're most proud of that is not on your CV?
- Tell us any three things that were not included in your application packet.

- Which of your recommendation writers (you don't have to say a name) do you admire most and why?

**At the end of the day:**

- How do you want to be remembered today?
- What did you learn about our program today?
- Now that you know more about our program, what would you change if you were trying to improve it?

**Rotation Related Questions**

- What was your worst day on rotation?
- What was your best day on rotation?
- What has been your favorite rotation so far?
- What was your most challenging rotation?
- What did you like the most about your favorite rotation site? What did you dislike about your least favorite rotation site?
- How do you prepare for a new rotation?
- What were your responsibilities on your \_\_\_\_ rotation? Follow up: Were those the expectations of students before you, or did you go above and beyond?
- What was the last drug information question you answered?
- What is your process for working up patients? What are some things you look for in the chart? Do you feel like you are efficient or does it take you more time?
- What is one thing you have always gotten in the habit of looking at when working up patients? Do you have a specific example of a time this impacted patient care?
- What is an example of a cost saving measure used by the institution you were at most recently? Do you think this has any negative implications on patient care?
- What was the most difficult and demanding task you had to complete this year?
- Tell me about some pharmacy technology that you have worked with in the past.
- What is the most significant impact you have had on a patient?
- What is the most important thing you have learned about yourself on your APPE rotations?
- Describe a stressful time during your rotations and how you got through it.
- What would you do if you noticed a fellow student not paying attention while on rounds?

**Residency Questions**

- Why did you apply to our residency program?
- What excites you the most about our program?
- What are the top three characteristics of your ideal residency program?
- What do you think will be some challenges for you for this residency in particular?

- What do you hope to gain by doing this residency?
- What is one thing you're most excited about for next year?
- What is one thing you're most nervous about for next year?
- At the end of your PGY1 year, how are you going to look back and measure if you've been successful?
- How did you narrow down your residency search? By city, etc?
- What about doing a residency makes you uncomfortable or apprehensive?
- Do you want to pursue a PGY2? How certain are you that you want to do a PGY2? (asked for a specific percentage)
- What 3 aspects of this program that will help you in your future career?
- What do you expect from your preceptors?
- How do you see your role changing from rotations to residency?
- How do you see residency shaping your career path?
- How will this program help you reach your goals?
- What are you planning to do if you don't match with any program on Match Day?
- We know you are probably applying to other great programs, if you had to pick a weakness for this program what would it be?
- What two traits do you want in a residency director, preceptor, and co-resident?
- What is an area other than clinical knowledge that you hope to improve in through residency?
- What would you like your role to be like with precepting pharmacy students?
- What do you think about general PGY1 programs versus administrative residency programs?
- What do you do for fun, and what would happen if you were too pressed for time and had to stop doing that during residency?

### **Situational questions**

- Describe an experience you had working on a team. What were the benefits and challenges?
- Tell me about the last time you really struggled with something. What did you do to resolve that struggle?
- How would you handle this situation: You have a patient who had a DVT and is now about to get discharged but needs a discharge med review before they leave, you just were stopped in the hall by your medical resident who has a drug info question, you are carrying the kinetics pager and there is a new vanc order on a patient that needs to be dosed, and you are on your way to discuss patients with your preceptor in ten minutes.
- You are volunteering at a homeless shelter and a man who is dying of ESLD due to alcoholism asks you if you will sneak in alcohol for him because it's the only thing that brings him happiness. What do you say to him?

**“Tell me about a time when.....”**

- you had a conflict with a co-worker or group member.
- you were helping a patient and there was a delay in their service, prescription, etc. How did you explain it to the patient?
- you worked with people of a different background than you.
- you were working on a team and one person wasn't being very communicative.
- you were working on a team and one person wasn't participating. How did you get them to be more vocal and also get them to contribute to the work?
- you made a mistake. How did you fix it?
- you were a leader or a time when you took initiative.
- a physician did not accept a recommendation you made.
- you had a challenging encounter with a patient. How did you handle it?
- you missed a deadline. What would you differently knowing what you know now?
- you had to get buy in from others to implement an idea.
- you took on a job no one else wanted.
- you were competitive.
- you established a good working relationship with a physician or preceptor.
- you handled an interaction poorly.
- you received constructive criticism and created an action plan. What was the outcome?
- you had to learn to communicate differently with someone you were working with.
- you had to deal with stress due to an unexpected change.
- you had to deal with an upset patient or provider.
- you encountered a "gray area" on rotation, and how did you deal with it?
- you had to persuade someone to agree with your point of view.
- you led a group to accomplish a task.
- you felt overwhelmed. How did you deal with it?
- you worked on a group project that was going south. How did you deal with it?
- you failed.
- you faced an unexpected change.
- you worked on a project with little guidance or structure.
- you had to analyze a situation. How did you approach it, and what was the outcome?
- you had a significant impact on patient care.
- you failed to meet a goal.
- you had to make a decision quickly.
- you had conflicting obligations. How did you prioritize and handle the situation?
- you had a patient complaint. How did you address the problem and make sure that the patient felt heard?
- you were asked about an unfamiliar medication or disease state for a patient. How did you address/research this and how did you use your new knowledge to help improve that patient's care?
- your initial solution to a problem did not work.



- you went above and beyond to accomplish a task.
- you had a difficult encounter during which you had to stay positive.
- you had to motivate others.
- you worked on a project with someone who disagreed with you.
- you were stressed balancing multiple priorities.
- you disagreed with a preceptor.
- you were on a team and you had to compromise.
- a coworker was not carrying their weight and how you handled it.

### **Clinical questions**

- A patient with a PE is started on warfarin 10 mg. What else would you want to know about the patient to determine if this dose is appropriate?
  - Follow-up: The INR comes back at 1.8 after one dose of 10mg. What do you do? How do you communicate this to another provider?
- You're staffing and an order comes in for enoxaparin 200 mg BID. What would you look for in the patient's chart to determine if this is appropriate?
  - Follow-up: They are 200 kg, and their CrCl is appropriate. Do you verify the order as is?
- A nurse calls you with a vancomycin level of 21, and she wants to know what to do. What other information would you want to know?
  - Follow-up: You are treating MRSA bacteremia, and the patient has normal kidney function. Would you recommend a dose adjustment?
- Patient case: 60 YOWM with diabetes
  - What statins (name and dosages) are considered high-intensity statins?
  - What immunizations would you recommend for this patient?
  - (Patient was on citalopram) How would you assess if this antidepressant is working for a patient?
  - If citalopram was not working, what other medications would you recommend?
- A fentanyl patch is ordered for a patient with a PCA who's opioid naive. Would you approve the order? If not, how do you approach the intern who put in the order to discuss your concerns?
- Mock counseling on how to use a rescue inhaler.
- A physician comes up to you and asks you how to dose Cipro. How would you respond?
- A patient is being treated for cellulitis with vancomycin and cipro, and develops a PE. What other information do you want to know? What recommendations would you make?
  - The patient is discharged on warfarin, then returns 4 weeks later to ED unresponsive (has a sub arachnoid hemorrhage). What other information do you want to know? What recommendations would you make?
- I was asked to work on a clinical case with another candidate in a room with 2 interviewers, and then present the case to the interviewers.

- What pre op antibiotics would you recommend for a patient with diverticulitis undergoing abdominal surgery?
- What would you recommend for post op pain management in an opioid tolerant patient?
- Clinical questions: What factors do you consider in answering these questions, and what drug information resources would you use to gather more information?
  - An oncology patient is using an herbal supplement to treat their pain.
  - A pregnant patient with a penicillin allergy presents with a UTI.
  - An attending asks you about biosimilar use. How do you explain the concept of a biosimilar to the attending?
- What would a P&T committee consider when debating the addition of a new drug for muscular dystrophy that was approved after phase 2 trials and costs \$500,000/year?

### **Miscellaneous**

- I interviewed one place where they didn't ask me a single question all day (they just asked, over and over, what questions I had for them).
- I had one group of interviewers blatantly tell me at the beginning of a session that they wanted me to give stories and examples for each answer and then exclusively ask questions that did not lend themselves to that type of answer. Later I found out that this was done on purpose as a challenge to see if you will follow directions and answer in a story like they had said to do. For example: instead of "Tell me about a time you went above and beyond for a patient" which would have prompted anyone to tell a story, they said "Define patient care" and just waited to see if you would tell a story to follow instructions.
- There were 2 candidates and 2 interviewers, and we were asked to work together on a "SWOT" (strengths, weaknesses, opportunities, threats) analysis regarding the future of pharmacy.
- Essay questions: (The essay questions were provided the day of my interview, and I was given 30 minutes to complete all questions.)
  - Tell us about a positive interaction you had with a patient.
  - Tell us about a project that you worked on throughout pharmacy school/APPEs.
  - Describe your ideal residency project and answer two of the following – what disease state would you want to focus on? What personal skills would you want to improve by working on this project? What barriers/challenges would you face?

## Case Presentation Examples

# Frontline Management of CLL

IMAN AHMED, PHARM.D

PGY2 HEMATOLOGY/ONCOLOGY PHARMACY RESIDENT

NEWYORK-PRESBYTERIAN HOSPITAL

OCTOBER 8<sup>TH</sup> 2020

# Objectives

- ▶ Review chronic lymphocytic leukemia (CLL) staging and frontline management
- ▶ Discuss the pharmacology and toxicity management of ibrutinib
- ▶ Summarize current literature on management of atrial fibrillation with ibrutinib

# Patient Case

# Patient Case

- ▶ 65 year old male admitted for initial treatment of CLL
- ▶ Past medical history:
  - ▶ Hypertension
  - ▶ Chronic kidney disease (stage 3)
  - ▶ Congestive heart failure
  - ▶ Hyperlipidemia
  - ▶ Gout
  - ▶ Atrial fibrillation with RVR
    - ▶ Failed DCCV 1/8/20 and 2/2020
    - ▶ Previously on sotalol
    - ▶ Currently on rivaroxaban and metoprolol

# Patient Case

- ▶ Allergies
  - ▶ Penicillin
- ▶ Social History
  - ▶ Alcohol use
- ▶ Family history
  - ▶ Father had a form of non-Hodgkin's lymphoma
  - ▶ Sister had Hodgkin's lymphoma in her teenage years and developed secondary head and neck cancer

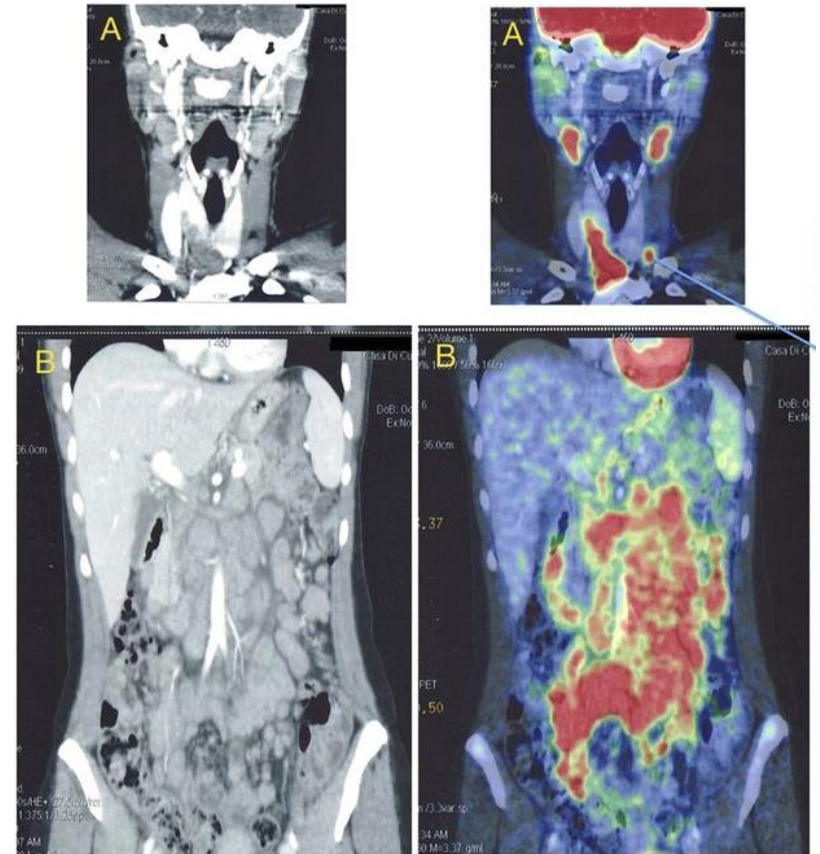


# Patient Case

- ▶ Oncologic history
  - ▶ Diagnosed with CLL (deletion 13q and deletion 11) in 2015 after spraining his ankle and noted to have high white blood cell count
  - ▶ Upon diagnosis he was Rai/Binet stage 1A
    - ▶ WBC: 17
    - ▶ Hb: 14
    - ▶ Plt: 177
    - ▶ ALC: 12
  - ▶ Flow cytometry revealed a clonal population of B cells comprising 57.4%

# Patient Case

- ▶ Patient was on observation until 6/2020
- ▶ Patient became symptomatic with fatigue and weight loss
- ▶ PET/CT showed lymphadenopathy throughout the cervical, axillary, mediastinal, cardiophrenic, mesenteric, retroperitoneal, iliac and inguinal lymph nodes bilaterally
- ▶ Splenomegaly
- ▶ Recent hospitalization for sepsis pneumonia, lower urinary tract infections, and recurrent nephrolithiasis requiring IV antibiotics and PICC placement



# Hospital Course

- ▶ Required lithotripsy and stent exchange for nephrolithiasis
- ▶ All cultures were negative to date
- ▶ Episodes of bradycardia and tachycardia post stent exchange
- ▶ CT chest significant for pulmonary nodules
- ▶ Medications upon admission
  - ▶ Allopurinol
  - ▶ Amlodipine
  - ▶ Apixaban
  - ▶ Metoprolol tartrate

## Labs prior to Chemotherapy

WBC: 110	Plt: 40
Hgb: 8	ALC: 144
Hct: 27	ANC: 0.92

Na: 144	Cl: 111
K: 3.9	CO <sub>2</sub> : 21
Scr: 1.62	BG: 114
BUN: 34	Phos: 2.9
Ca: 8.7	UA: 7.8

AST/ALT: 28/23	T.bili: 0.5
Alk phos: 135	D. bili: 0.2

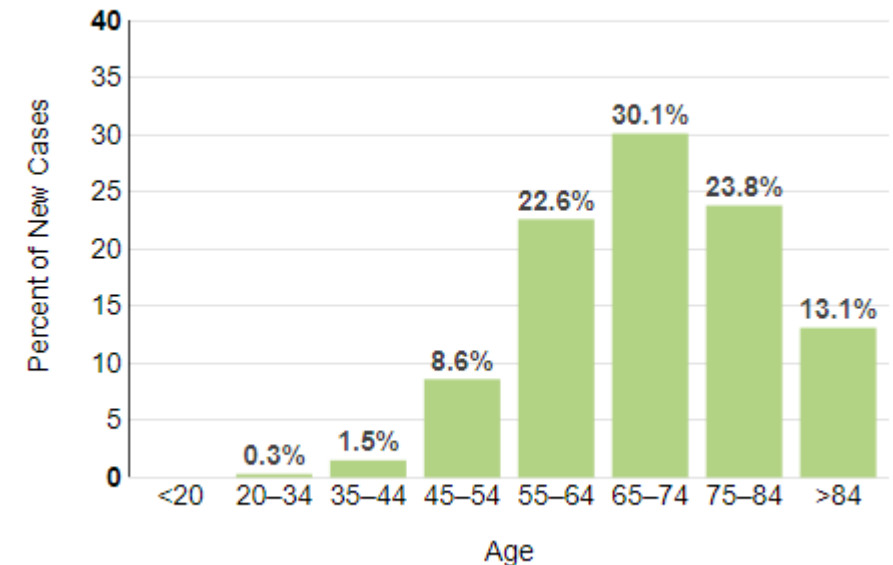
# Treatment Plan

- ▶ Untreated CLL with deletion 13q and deletion 11q
- ▶ Treatment
  - ▶ Bendamustine 50 mg/m<sup>2</sup> for 2 days
  - ▶ Rituximab 375 mg/m<sup>2</sup>
- ▶ Prophylactic medications:
  - ▶ Bactrim
  - ▶ Valtrex
  - ▶ Posaconazole (given pulmonary nodules)

# CLL Overview

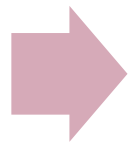
# CLL Overview

- ▶ CLL is the progressive accumulation of leukemic cells in peripheral blood
- ▶ Median age at diagnosis is ~72 years
- ▶ Indolent disease with a risk of transforming into an aggressive disease
  - ▶ Diffuse large B-cell lymphoma (Richter's transformation)
- ▶ Survival is correlated with stage at diagnosis
  - ▶ 5-Year Relative Survival Rate (2010-2016): 86.1%



# Pathogenesis

B cells undergo malignant transformation and are continuously activated by acquisition of mutations leading to monoclonal B-cell lymphocytosis



Further accumulation of genetic abnormalities and subsequent oncogenic transformation leads to CLL



CLL progression causes abnormal hematopoiesis resulting in anemia, neutropenia, and thrombocytopenia

# Prognostic Markers in CLL

## DNA Sequencing and Flow Cytometry

	Favorable	Unfavorable
Immunoglobulin heavy-chain variable (IGHV)	>2% mutation	≤2% mutation
CD38	<30%	≥30%
CD49d	<30%	≥30%
TP53 status	Wild-type	Mutated

## FISH Cytogenetics

Unfavorable	Neutral	Favorable
Del(11q) Del(17p)	Normal karyotype and trisomy 12	Del(13q) as the sole abnormality

## Complex Karyotype

Unfavorable
≥3 unrelated chromosomal abnormalities in more than one cell on karyotype



# Staging and Diagnosis

- ▶ The diagnosis of CLL requires the presence of  $\geq 5000$  B lymphocytes/ $\mu\text{L}$  in the peripheral blood for the duration of at least 3 months
- ▶ Patients typically present with no symptoms or B symptoms
  - ▶ Lymphocytosis and lymphadenopathy is the most common presentation
  - ▶ Fever, night sweats, weight loss, fatigue
- ▶ There are two staging systems in CLL:
  - ▶ Rai staging
  - ▶ Binet staging

# CLL Staging

## Rai Staging

Stage 0	Lymphocytosis, lymphocytes in blood $>5 \times 10^9/L$ clonal B cells and $>40\%$ lymphocytes in the bone marrow
Stage I	Stage 0 plus enlarged lymph nodes
Stage II	Stage 0-I plus hepatomegaly, splenomegaly, or both
Stage III	Stage 0-II plus Hb $< 11$ g/dL or hematocrit $< 33\%$
Stage IV	Stage 0-III plus thrombocytopenia with platelet counts $< 100,000/mcL$

## Binet Staging

Stage A	Hemoglobin $\geq 10$ g/dL, Platelets $\geq 100,000/mm^3$ , and $\leq 3$ enlarged areas
Stage B	Hemoglobin $\geq 10$ g/dL, Platelets $\geq 100,000/mm^3$ , and $\leq 3$ enlarged areas
Stage C	Hemoglobin $< 10$ g/dL, and/or Platelets $< 100,000/mm^3$ , and number of enlarged areas

# General Treatment Principals

- ▶ This is not a curable disease and progresses
- ▶ For all patients with CLL, the goal of frontline therapy is to palliate symptoms and extend survival
- ▶ Active surveillance is a treatment approach in asymptomatic patients with early stage disease
- ▶ Patients who need treatment:
  - ▶ Patients with advanced disease (RAI stage III or IV or Binet stage C)
  - ▶ Intermediate risk disease (Rai stage I or II or Binet stage B) presenting with symptoms, end organ function, bulky disease, bone marrow failure, symptomatic extranodal involvement, or an absolute lymphocyte count  $>200,000$  cells/mm<sup>3</sup>, any increase of  $\geq 50\%$  over a 2-month period, or lymphocyte doubling time of  $< 6$  months

# Barriers to Treatment

Age

Comorbidities

Performance  
status

Decline in  
organ  
function

Frail

# Frontline Management

# Patients without del(17p)/TP53 Mutation

	Preferred Regimens	Other Recommended Regimens
Frail patients with significant comorbidity or patients aged $\geq 65$ years and younger patients with significant comorbidities ( $< 70 \text{ mL/min}$ )	Ibrutinib (category 1) Acalabrutinib +/- obinutuzumab Venetoclax + obinutuzumab	Bendamustine + anti-CD20 monoclonal antibody Chlorambucil + obinutuzumab High dose methylprednisolone (HDMP) + rituximab Ibrutinib + obinutuzumab Obinutuzumab
Patients aged $< 65$ years without significant comorbidities	Ibrutinib (category 1) Acalabrutinib +/- obinutuzumab Venetoclax + obinutuzumab	Bendamustine + anti-CD20 monoclonal antibody FCR FR HDMP + rituximab Ibrutinib + rituximab

FCR: Fludarabine, cyclophosphamide, rituximab

FR: Fludarabine, rituximab

# Patients with del(17p)/TP53 Mutation

Preferred Regimens	Other Recommended Regimens
Ibrutinib Acalabrutinib +/- obinutuzumab Venetoclax + obinutuzumab	Alemtuzumab +/- rituximab Obinutuzumab HDMP + rituximab

# Ibrutinib

- ▶ Approved for CLL treatment in patients with or without 17p deletion
- ▶ Dose is 420 mg daily
- ▶ Hepatic adjustments
  - ▶ Mild impairment (Child-Pugh class A): Reduce dose to 140 mg once daily
  - ▶ Moderate impairment (Child-Pugh class B): Reduce dose to 70 mg once daily
  - ▶ Severe impairment (Child-Pugh class C): Avoid use

Absorption is 1-2  
hours

Half life is 4-6  
hours

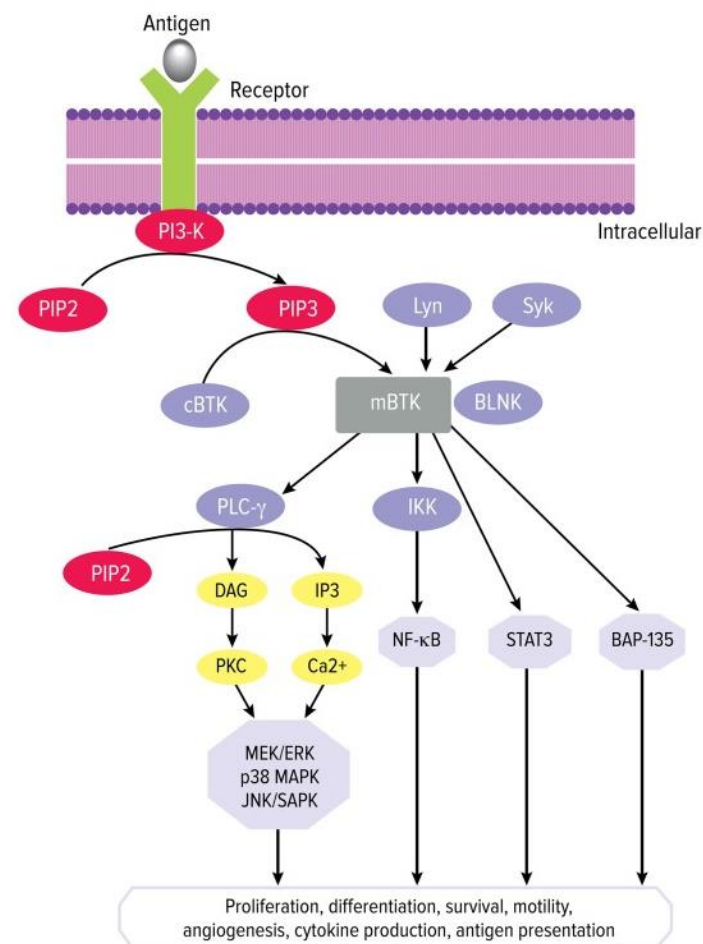
Elimination by  
hepatic  
metabolism  
(CYP3A)

Interactions  
with CYP3A  
enzymes



# Mechanism of action

- ▶ Irreversible inhibitor of Bruton's tyrosine kinase (BTK)
- ▶ Forms covalent bond on BTK active site leading to inhibition of BTK enzymatic activity and decreased cell survival
- ▶ BTK is a signaling molecule on B-cell receptors that promotes cell proliferation, motility, and survival



# Adverse events

Bleeding

Infections

Cardiac  
arrhythmias

Hypertension

Cytopenia

Tumor lysis  
syndrome

# Adverse events

Bleeding

Infections

Cardiac  
arrhythmias

Hypertension

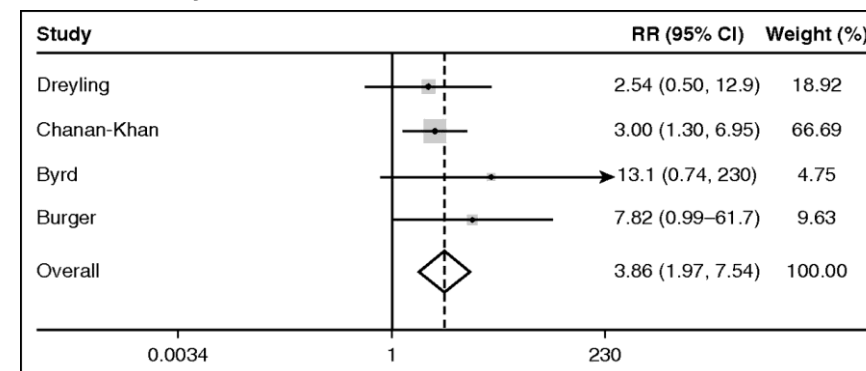
Cytopenia

Tumor lysis  
syndrome

# Cardiotoxicity

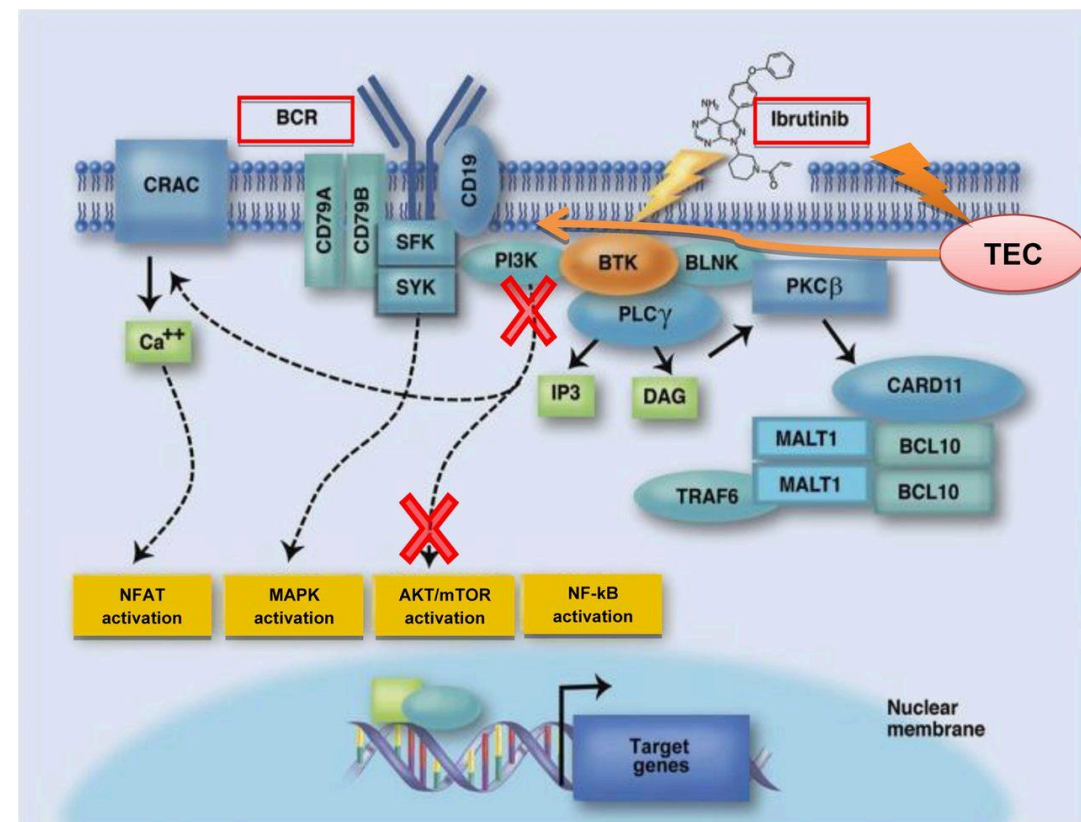
- ▶ The incidence of atrial fibrillation in patients receiving ibrutinib is reported in all clinical trials for different indications
  - ▶ The incidence is 6-15%
- ▶ There have been reports of sudden cardiac death and ventricular arrhythmias
- ▶ Median onset of 65 days from ibrutinib initiation
- ▶ Risk factors
  - ▶ Age greater than 65
  - ▶ Previous history of atrial fibrillation
  - ▶ Acute infection
  - ▶ Hypertension

**The risk of atrial fibrillation with ibrutinib use: a systematic review and meta-analysis**



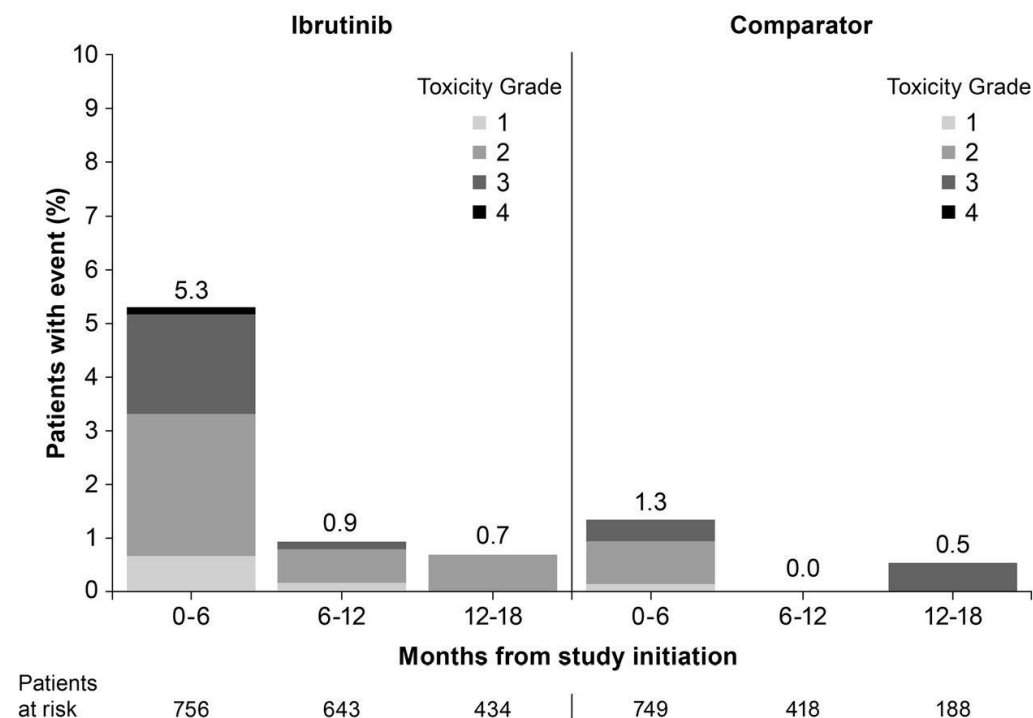
# Mechanism of Cardiotoxicity

- ▶ On target effects of BTK inhibition prevents the activation of phosphoinositide 3-kinase (PI3K)-Akt pathway
- ▶ Off target effects of ibrutinib include inhibition of Tec protein tyrosine kinase (TEC) which in turn also inhibits PI3K
- ▶ PI3K regulates cardiac protection under stressful conditions and is regulated by both BTK and TEC
- ▶ Ultimately downregulation of PI3K-Akt signaling pathway leads to atrial fibrillation



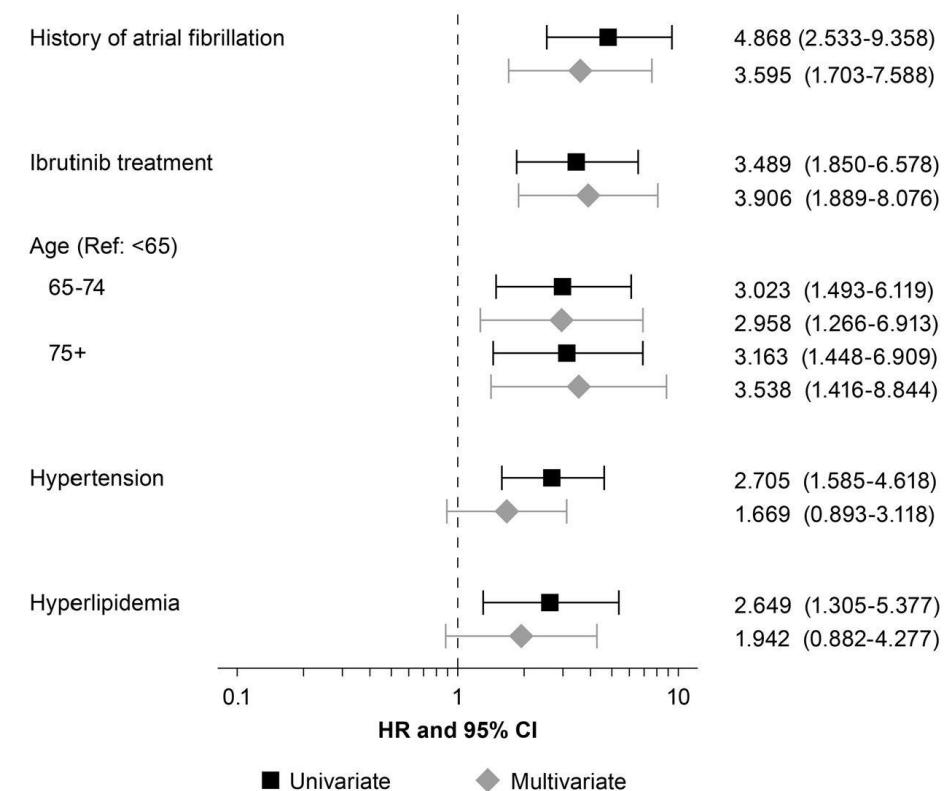
# Landmark Trials

- ▶ Results from 4 landmark trials
- ▶ Incidence of AF was 7.0% in CLL patients
- ▶ Estimated cumulative incidence rate of AF at 36 months was 13.8% (95% CI: 11.2, 16.8)
- ▶ AF while on treatment occurred in 6.5% vs 1.6%
- ▶ Most AF events developed de novo in patients without a history of atrial fibrillation



# Clinical Features from Landmark Trials

- ▶ Significant risk factors for developing atrial fibrillation
  - ▶ Hypertension
  - ▶ Hyperlipidemia
  - ▶ Age greater than 65
  - ▶ Prior history
  - ▶ Ibrutinib therapy
- ▶ Independent predictors of atrial fibrillation:
  - ▶ Prior history of atrial fibrillation
  - ▶ Ibrutinib therapy
  - ▶ Age greater than 65 years



# Management



# Literature Review

	Thompson et al. 2016	Wiczer et al. 2017	Khalid et al. 2018
<b>Study Design</b>	Retrospective, international study between 2010 to 2015	Retrospective, single-center study between 2009 and 2016	Retrospective study conducted in one hospital between 2014 and 2017
<b>Patient Population</b>	CLL who developed AF n= 56	All hematologic malignancies n=582	CLL, MCL, WM n= 43
<b>Intervention</b>	Ibrutinib, ibrutinib plus rituximab	Ibrutinib, ibrutinib in combination with other anticancer therapy (30%)	Ibrutinib
<b>Results</b>	Of all 56 patients, 27% had a history of AF	76 patients developed AF 63 patients developed incident AF 13 patients developed recurrent AF 6 months, 1 year, and 2 years was 5.9% (95% CI: 4.2-8.0), 7.5% (95% CI: 5.5-9.9), and 10.3%	14 (32.5%) had or developed atrial fibrillation 10 patients had AF prior to therapy 4 patients had new AF
<b>AF onset</b>	3.8 months	7.6 months	Within 1 year
<b>Management</b>	51 (91%) received antiarrhythmic (amiodarone) Permanent discontinuation in 22 patients Dose reduction in 13 patients Rechallenge at lower dose after initiation of antiarrhythmic medication Anticoagulation management in 27 (48%)	Continuation at full dose 33 (43.4%) of which 8 patients (24.2%) developed AF Temporary hold in 35 (46.1%) of which (31.4%) developed subsequent AF Discontinuation in 7 (9.2%) Antiplatelet management in 8 patients	Rate and rhythm control Mostly with amiodarone and beta blockers Dose reduction/discontinuation of ibrutinib (n=3) Anticoagulation/antiplatelet in all patients (aspirin, warfarin, enoxaparin, apixaban)

# Atrial fibrillation in CLL patients treated with ibrutinib. An international retrospective study (2016)

- ▶ Retrospective, international study between 2010 to 2015
- ▶ CLL patients who received ibrutinib and developed atrial fibrillation
- ▶ All patients treated with ibrutinib 420mg per day
  - ▶ Included 5 patients who received ibrutinib in combination with rituximab
  - ▶ Median age: 70 years
  - ▶ 27% of patients had prior history of atrial fibrillation
- ▶ N= 56

# Atrial fibrillation in CLL patients treated with ibrutinib. An international retrospective study (2016)

- ▶ Electrocardiogram-confirmed AF during therapy with paroxysmal episodic, lasting <7 days in 64% of patients
- ▶ Median time to onset of tachyarrhythmia was 3.8 months (range: 6–1410 days)
- ▶ Risk factors identified
  - ▶ Hypertension (64%)
  - ▶ History of paroxysmal AF (27%)
  - ▶ Valvular dysfunction (25%)
  - ▶ Congestive heart failure (12%)

Grade 1-2 in  
58% of patients

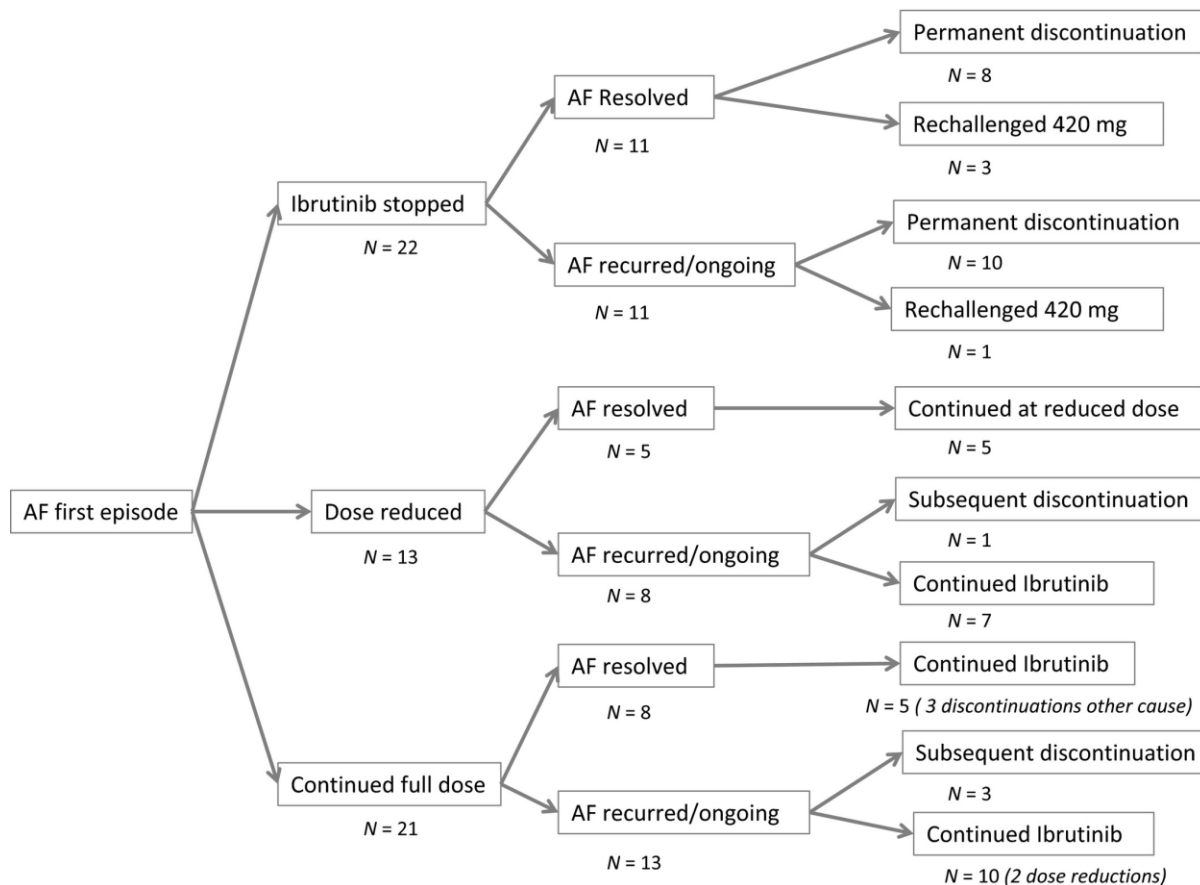
Grade 3-4 in  
42% of patients

# Atrial fibrillation in CLL patients treated with ibrutinib. An international retrospective study (2016)

Antiarrhythmic medication	51/56 (91)
Amiodarone	19/56 (34)
Betablockers	38/56 (68)
Flecaine	7/56 (12)
Calcium inhibitors	4/56 (7)
Cardioversion	4/56 (7)

AF reverted in 35/56  
(62%) of cases but  
recurred in 10 of these 35  
cases (28%)

# Atrial fibrillation in CLL patients treated with ibrutinib. An international retrospective study (2016)



AF resolved in 21 (37%)  
cases but remained in  
35 (63%) of cases

# Atrial fibrillation in CLL patients treated with ibrutinib. An international retrospective study (2016)

Antiplatelet agents	19/56 (34)
Aspirin alone	16/56 (29)
Aspirin + Clopidrogel	2/56 (3)
Aspirin + Clopidrogel + LMWH	1/56 (2)
Anticoagulants	27/56 (48)
Warfarin	7/56 (12)
LMWH	5/56 (9)
Novel oral anticoagulants	15/56 (27)

14% of all patients  
experienced grade 3–4  
bleeding events

# Cumulative incidence, risk factors, and management of atrial fibrillation in patients receiving ibrutinib (2017)

- ▶ Retrospective, single-center study between December 2009 and March 2016
- ▶ Patients
  - ▶ ≥18 years old and treated with ibrutinib for a hematologic malignancy including but not limited to CLL, MCL, WM, and other non-Hodgkin lymphomas
- ▶ Primary objective of this study was to describe the cumulative incidence of AF
- ▶ Secondary objectives were to describe the management of AF, including rhythm control and stroke prevention, to evaluate outcomes of AF patients, including bleeding complications and stroke, and to identify risk factors for the development of AF
- ▶ N=582

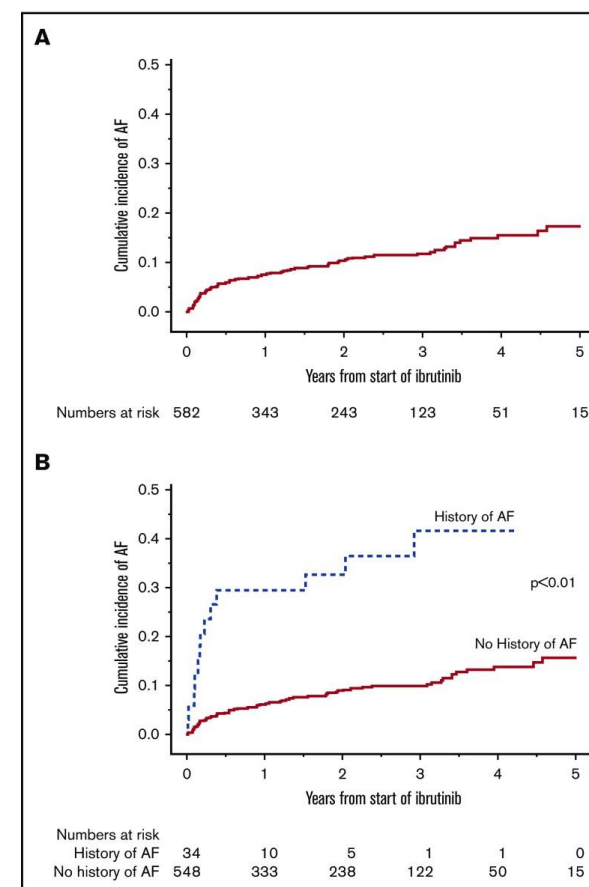
# Cumulative incidence, risk factors, and management of atrial fibrillation in patients receiving ibrutinib (2017)

- ▶ Median age of 65 years
- ▶ Eastern Cooperative Oncology Group (ECOG) performance status of 0 to 1 (92.5%)
- ▶ Concomitant anticancer therapy with ibrutinib was used in 175 (30.1%) patients
  - ▶ Monoclonal antibodies was the most common concomitant therapy (24.9%)
- ▶ 34 (5.8%) patients had a prior history of AF
- ▶ Comorbidities (%)
  - ▶ Hypertension (45)
  - ▶ Diabetes (13)
  - ▶ Coronary artery disease (11)
  - ▶ Myocardial infarction (6)

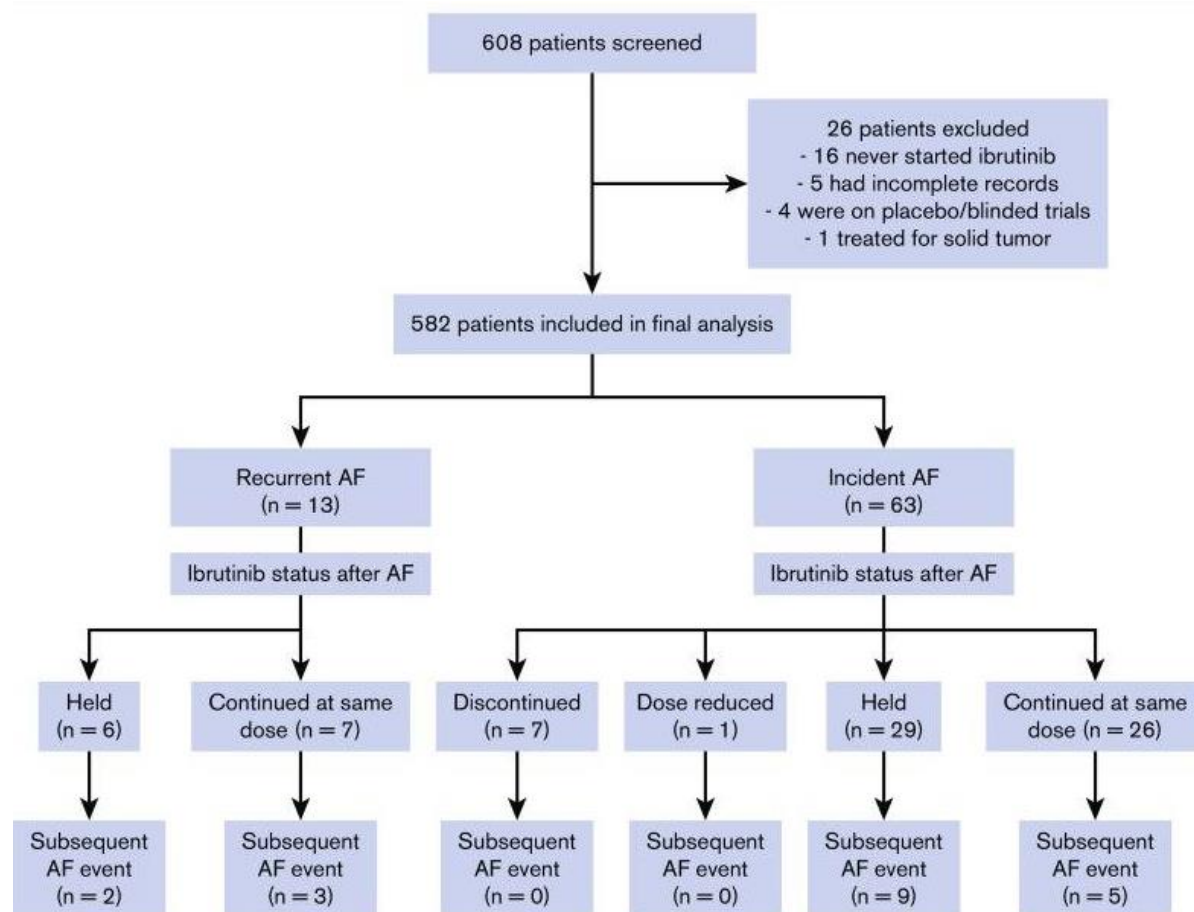


# Cumulative incidence, risk factors, and management of atrial fibrillation in patients receiving ibrutinib (2017)

- ▶ At median follow-up of 32 months there were 76 (13%) AF cases
  - ▶ 63 patients developed incident AF
  - ▶ 13 patients developed recurrent AF
- ▶ Median time of onset was 7.6 months (range 0.2-63.4)
- ▶ Cumulative incidence of AF
  - ▶ 6 months: 5.9% (95% CI: 4.2-8.0)
  - ▶ 1 year: 7.5% (95% CI: 5.5-9.9)
  - ▶ 2 years: 10.3% (95% CI: 8.0-13.0)



# Cumulative incidence, risk factors, and management of atrial fibrillation in patients receiving ibrutinib (2017)



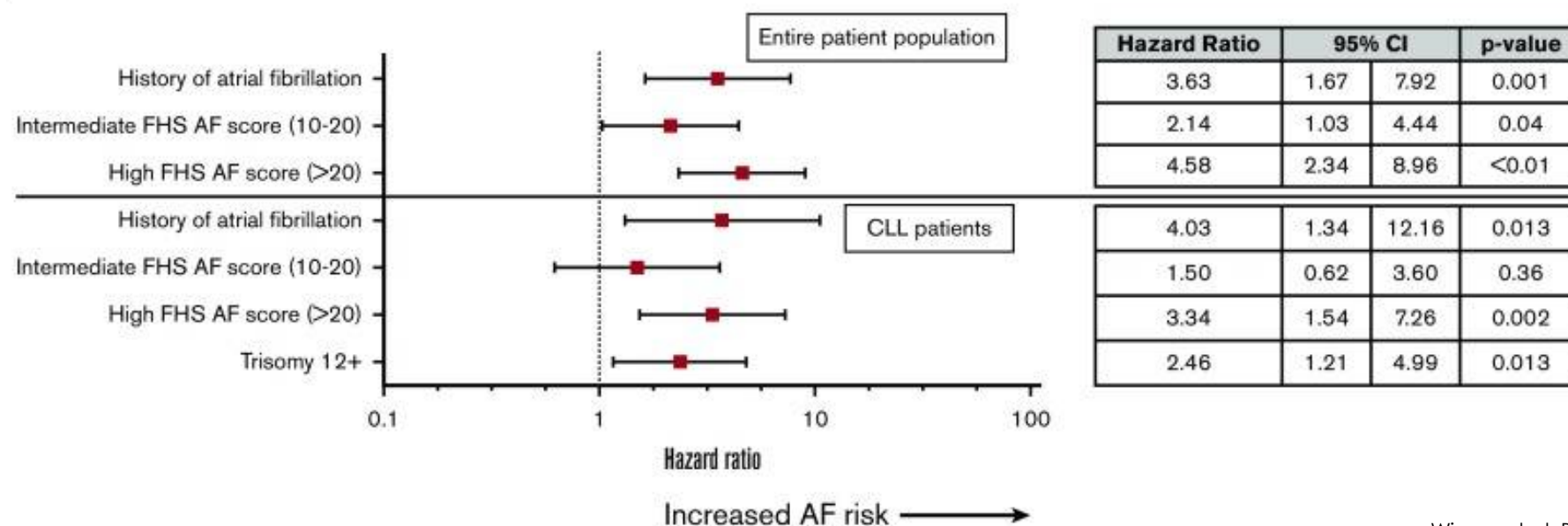
# Cumulative incidence, risk factors, and management of atrial fibrillation in patients receiving ibrutinib (2017)

AF management, n (%)				
	All AF (n = 76)	Incident AF (n = 63)	Recurrent AF (n = 13)	P-value
None	7 (9.2)	5 (7.9)	2 (15.4)	.34
Yes	69 (90.8)	58 (92.1)	11 (84.6)	
Rate control	60 (78.9)	50 (79.4)	10 (76.9)	.99
Class II agents	43 (56.6)	35 (55.6)	8 (61.5)	.77
Class IV agents	33 (43.4)	28 (44.4)	5 (38.5)	.77
Class V agents	5 (6.6)	5 (7.9)	0	.58
Rhythm control	16 (21.1)	14 (22.2)	2 (15.4)	.72
Class I agents	8 (10.5)	7 (11.1)	1 (7.7)	.99
Class III agents	11 (14.5)	10 (15.9)	1 (7.7)	.68
Cardiac ablation	3 (3.9)	3 (4.8)	0	.99
Cardioversion	11 (14.5)	10 (15.9)	1 (7.7)	.68
Pacemaker	3 (3.9)	3 (4.8)	0	.9

Rate control: 62%  
Rhythm control: 5%  
Rate and rhythm control: 15%

# Cumulative incidence, risk factors, and management of atrial fibrillation in patients receiving ibrutinib (2017)

- ▶ Risk factors for development of AF
  - ▶ Framingham Heart Study (FHS-AF) score of intermediate or high risk
  - ▶ History of AF



# Management of Atrial Fibrillation in Patients on Ibrutinib: A Cleveland Clinic Experience (2018)

- ▶ Retrospective descriptive chart review study over a three-year period from February 2014 to February 2017
- ▶ Patients 18 years or older with either chronic lymphocytic leukemia, mantle cell lymphoma, or Waldenström's macroglobulinemia
- ▶ 597 charts from the Cleveland Clinic database
  - ▶ 43 patients received ibrutinib
    - ▶ 10 had prior atrial fibrillation
    - ▶ 4 had new atrial fibrillation

# Management of Atrial Fibrillation in Patients on Ibrutinib: A Cleveland Clinic Experience (2018)

- ▶ Mean age 68 years
- ▶ Comorbidities:
  - ▶ Hypertension 78.57%
  - ▶ Diabetes mellitus 21.43%
  - ▶ Congestive heart failure 21.43%
  - ▶ Coronary artery disease (43%)
- ▶ Mean starting dose
  - ▶ Prior atrial fibrillation: 569 mg
  - ▶ New atrial fibrillation: 420 mg

# Management of Atrial Fibrillation in Patients on Ibrutinib: A Cleveland Clinic Experience (2018)

Rate and rhythm controlling agents			
	All (14)	Atrial fibrillation prior to starting ibrutinib (10)	Atrial fibrillation after starting ibrutinib (4)
Beta blockers (BB)	13 (92.86%)	10 (100%)	3 (75%)
Diltiazem	1 (7.14%)	1 (10%)	0
Amiodarone	5 (35.71%)	3 (30%)	2 (50%)
Flecainide	1 (7.14%)	1 (10%)	0
Digoxin	1 (7.14%)	1 (10%)	0
Tikosyn	2 (14.29%)	1 (10%)	1 (25%)
Change in rate control drugs – discontinued/decreased dose/changed to a different drug	9 (64.29%)	8 (80%) (doses of beta blockers reduced or stopped x6, Cardizem decreased x1, beta blockers increased x1)	1 (25%) (stopped amiodarone and Tikosyn)
Change in dose of ibrutinib or discontinued	3 (21.43%)	2 (20%)	1 (25%)
Cardioversion (yes)	3 (21.3%)	3 (30%)	0
Ablation (yes)	1 (7.14%)	1 (10%)	0

# Management of Atrial Fibrillation in Patients on Ibrutinib: A Cleveland Clinic Experience (2018)

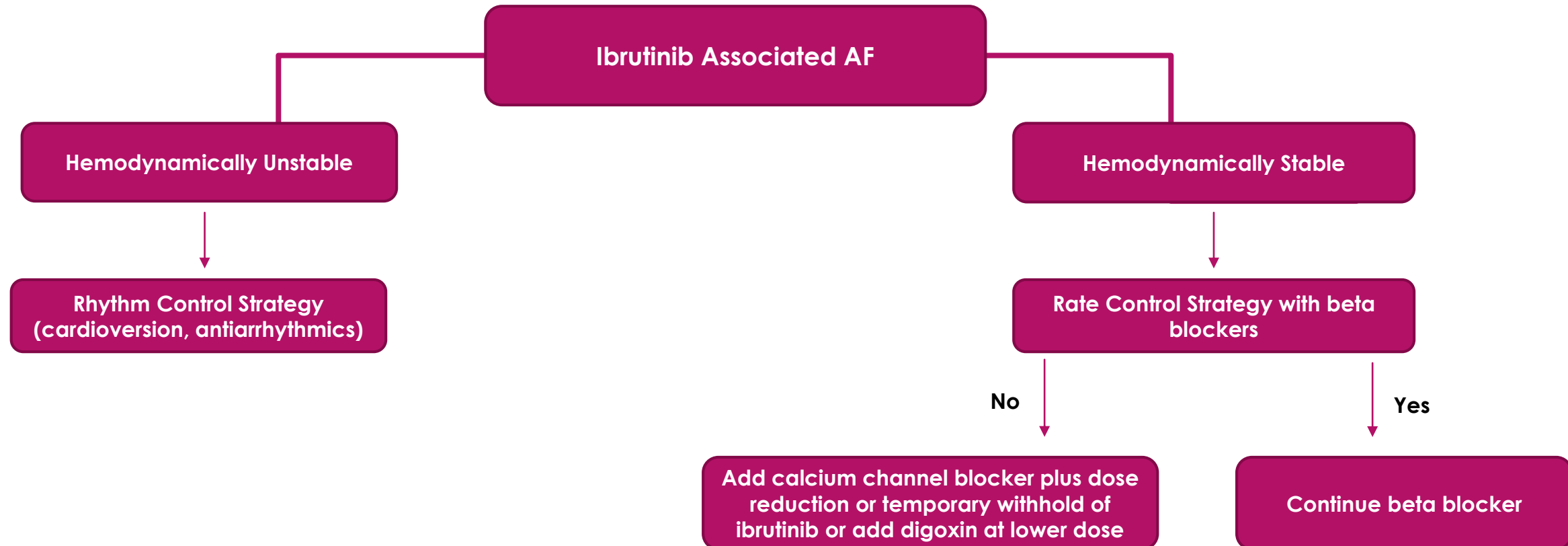
Antiplatelet agent or anticoagulants			
	All -14	Atrial fibrillation prior to starting ibrutinib (10)	Atrial fibrillation after starting ibrutinib (4)
Aspirin	12 (85.71%)	9 (90%)	3 (75%)
Warfarin	3 (21.43%)	3 (30%)	0
Enoxaparin	3 (21.43%)	1 (10%)	2 (50%)
Apixaban	3 (21.43%)	2 (20%)	1 (25%)



# Literature Review

	Thompson et al. 2016	Wiczer et al. 2017	Khalid et al. 2018
<b>Study Design</b>	Retrospective, international study between 2010 to 2015	Retrospective, single-center study between 2009 and 2016	Retrospective study conducted in one hospital between 2014 and 2017
<b>Patient Population</b>	CLL who developed AF n= 56	All hematologic malignancies n=582	CLL, MCL, WM n= 43
<b>Intervention</b>	Ibrutinib, ibrutinib plus rituximab	Ibrutinib, ibrutinib in combination with other anticancer therapy (30%)	Ibrutinib
<b>Results</b>	Of all 56 patients, 27% had a history of AF	76 patients developed AF 63 patients developed incident AF 13 patients developed recurrent AF 6 months, 1 year, and 2 years was 5.9% (95% CI: 4.2-8.0), 7.5% (95% CI: 5.5-9.9), and 10.3%	14 (32.5%) had or developed atrial fibrillation 10 patients had AF prior to therapy 4 patients had new AF
<b>AF onset</b>	3.8 months	7.6 months	Within 1 year
<b>Management</b>	51 (91%) received antiarrhythmic (amiodarone) Permanent discontinuation in 22 patients Dose reduction in 13 patients Rechallenge at lower dose after initiation of antiarrhythmic medication Anticoagulation management in 27 (48%)	Continuation at full dose 33 (43.4%) of which 8 patients (24.2%) developed AF Temporary hold in 35 (46.1%) of which (31.4%) developed subsequent AF Discontinuation in 7 (9.2%) Antiplatelet management in 8 patients	Rate and rhythm control Mostly with amiodarone and beta blockers Dose reduction/discontinuation of ibrutinib (n=3) Anticoagulation/antiplatelet in all patients (aspirin, warfarin, enoxaparin, apixaban)

# Management (ACC)

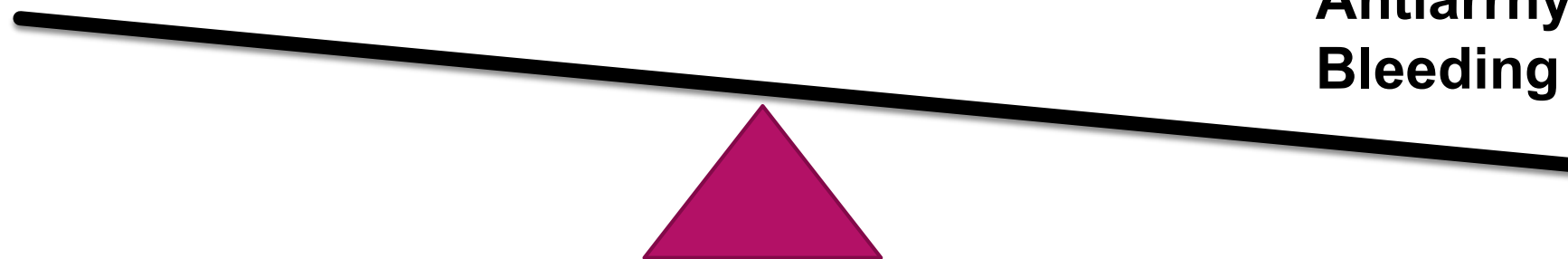


# Ibrutinib associated AF

# Fair Balance?

**CLL treatment**

**Antiarrhythmic DDI  
Bleeding risk**



# Challenge with Ibrutinib

- ▶ Ibrutinib is hepatically metabolized and a major CYP3A4 substrate
  - ▶ Many of the antiarrhythmic agents have drug interactions with ibrutinib that cause increased concentrations with administered concomitantly
- ▶ Stroke prevention is complicated by bleeding risk
  - ▶ Patients with atrial fibrillation require stroke prevention with anticoagulant however patients taking ibrutinib have an increased risk for bleeding
- ▶ Need for CLL treatment
  - ▶ Ibrutinib is effective in managing CLL patients and reports have shown that reduced dose of ibrutinib or permanent discontinuation can lead to CLL progression

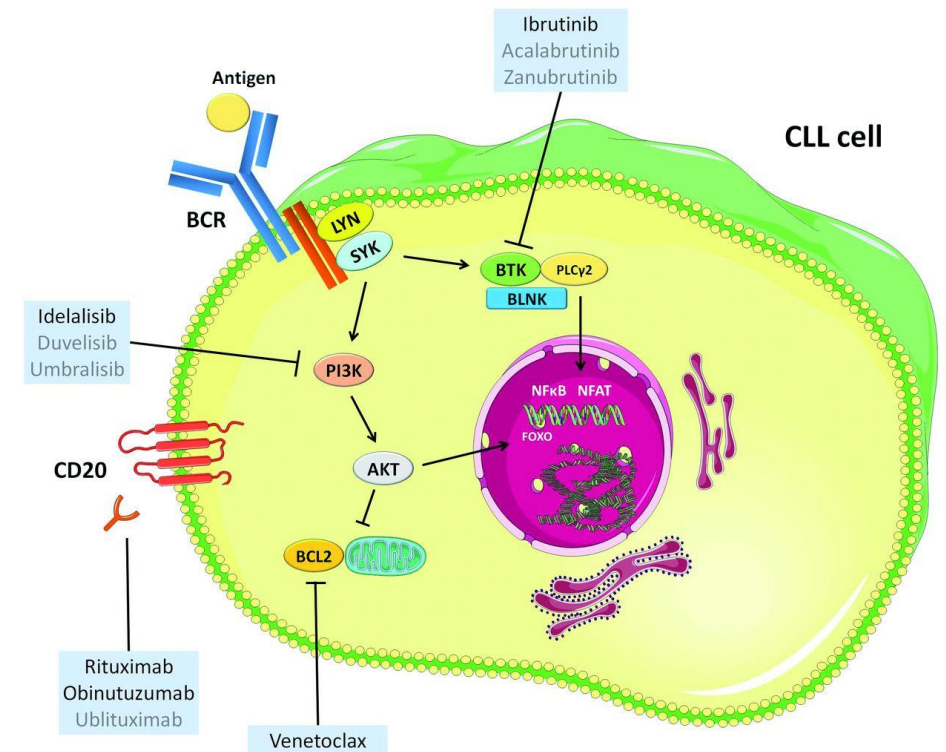
# AF Management Summary

- ▶ Patients with a history of AF who start ibrutinib therapy have increased risk of recurrent AF
  - ▶ Patients with prior history of AF and rate controlled can potentially be treated with ibrutinib therapy
- ▶ Patients who develop new onset AF after starting ibrutinib, the risk of subsequent AF continues with both dose reduction and when re-challenging at the standard dose
  - ▶ Discontinuation of ibrutinib is the only option to prevent subsequent AF

# Alternative Regimens

# Venetoclax

- ▶ Mechanism: selective and orally bioavailable small-molecule inhibitor of BCL-2 (antiapoptotic protein)
- ▶ Dose
  - ▶ Week 1: 20 mg
  - ▶ Week 2: 50 mg
  - ▶ Week 3: 100 mg
  - ▶ Week 4: 200 mg
  - ▶ Week 5 and beyond: 400 mg
- ▶ High risk for tumor lysis syndrome (TLS)



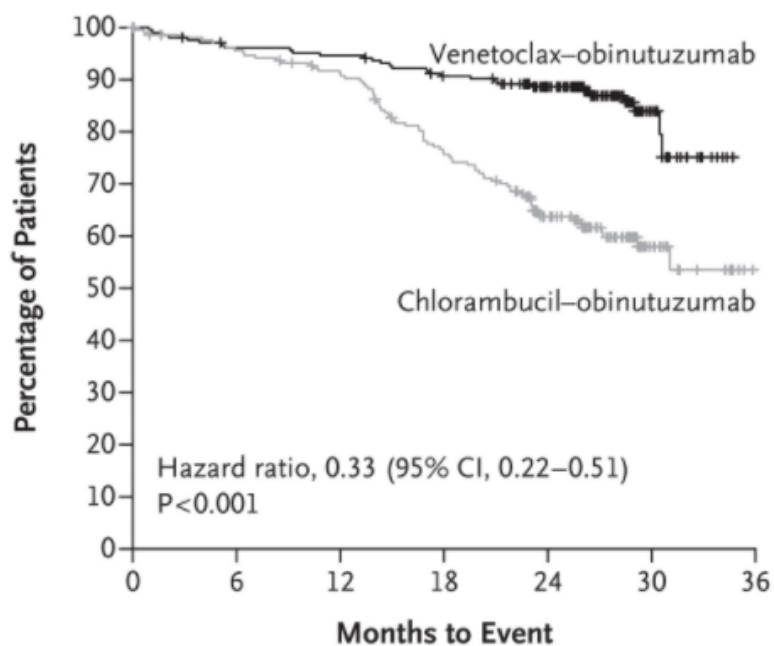


# CLL-14

- ▶ Randomized, multicenter, open label trial
- ▶ Patients with previously untreated CLL with coexisting medical conditions (n=432)
- ▶ Intervention (12 cycles lasting 28 days each)
  - ▶ Venetoclax in combination with obinutuzumab
  - ▶ Chlorambucil plus obinutuzumab
- ▶ Endpoints
  - ▶ Primary endpoint: investigator-assessed progression-free survival
  - ▶ Secondary endpoint: progression-free survival as assessed by an independent review committee, overall survival, overall and complete response

# CLL-14 Results

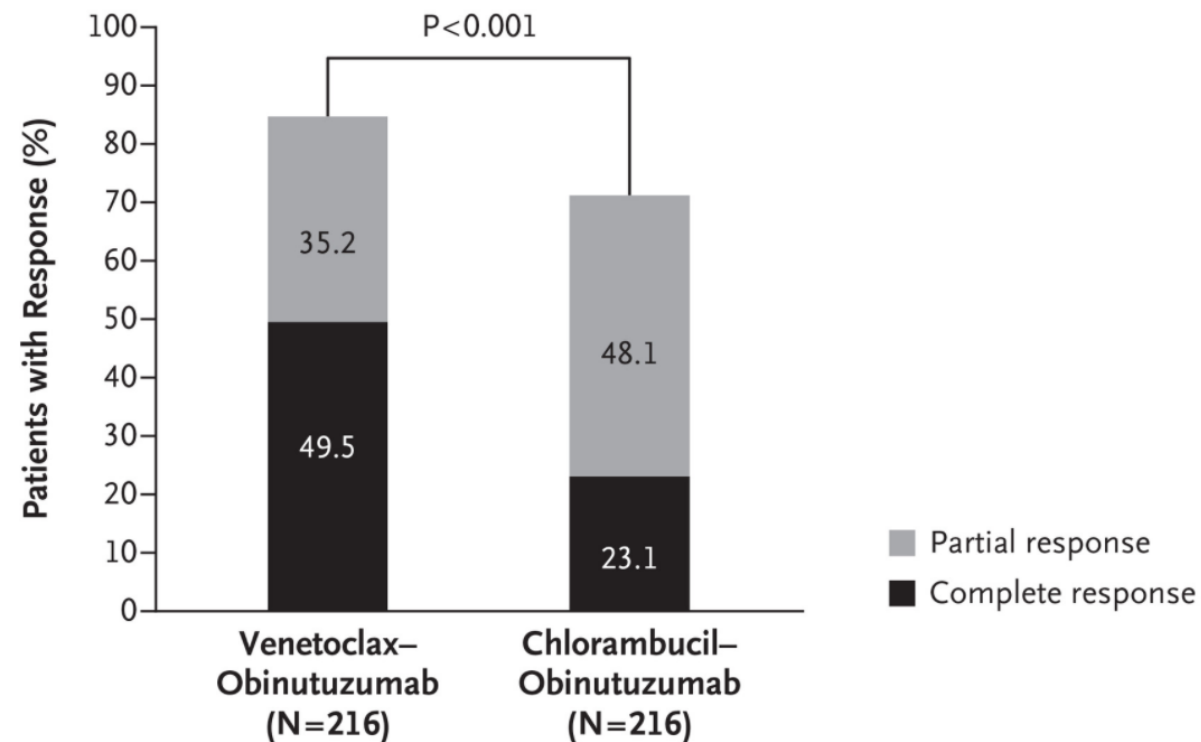
**B Progression-free Survival, Assessed by Independent Review Committee**



**No. at Risk**

Venetoclax-obinutuzumab	216	195	192	181	148	23	0
Chlorambucil-obinutuzumab	216	195	183	151	108	20	0

**C Treatment Response**



# Challenges with Venetoclax

- TLS risk with minimized with ramp up protocol
  - Laboratory TLS rates of 2.2%-4.7%
- Prophylaxis with allopurinol and IV fluids is recommended in all risk categories

Tumor Burden		Frequency of TLS labs
Low	All LN < 5 cm and ALC < 25 x 10 <sup>9</sup> /L	For first dose of 20 mg and 50 mg: Predose, 6 to 8 hours, 24 hours For subsequent ramp-up doses: Predose
Medium	Any LN 5 to < 10 cm and ALC ≥ 25 x 10 <sup>9</sup> /L	For first dose of 20 mg and 50 mg: Predose, 6 to 8 hours, 24 hours For subsequent ramp-up doses: Predose For first dose of 20 mg and 50 mg: Consider hospitalization for patients with CrCl < 80 ml/min
High	Any LN ≥ 10 cm or ALC ≥ 25 x 10 <sup>9</sup> /L and LN ≥ 5 cm	For first dose of 20 mg and 50 mg: Predose, 4, 8, 12 and 24 hours

# Bendamustine

- ▶ Mechanism: alkylating agent that leads to cell death via single and double strand DNA cross-linking
- ▶ Dose: 100 mg/m<sup>2</sup> administered intravenously over 30 minutes on Days 1 and 2 of a 28-day cycle, up to 6 cycles
- ▶ Adverse events (≥15%):
  - ▶ Hematologic: lymphopenia, anemia, leukopenia, thrombocytopenia, and neutropenia
  - ▶ Non-hematologic: pyrexia, nausea, and vomiting

## Hematologic Toxicity Dose Modifications

Grade 3 or greater toxicity: reduce dose to 50 mg/m<sup>2</sup> on Days 1 and 2

Grade 3 or greater toxicity recurs: reduce dose to 25mg/m<sup>2</sup> on Days 1 and 2

# Bendamustine (MABLE Study)

- ▶ Investigated the efficacy and safety of rituximab plus bendamustine (R-B) or rituximab plus chlorambucil (R-Clb) in fludarabine-ineligible patients with chronic lymphocytic leukemia (n=357)
- ▶ Patients with confirmed CLL, Binet stage B/C disease, ECOG performance status  $\leq 2$
- ▶ The primary endpoint was complete response rate (confirmed by bone marrow biopsy) after cycle 6
- ▶ Secondary endpoints included progression-free survival, overall survival, minimal residual disease, and safety

# MABLE Results

- ▶ Complete response rate after cycle 6 was higher with R-B vs R-Clb (24% vs 9%  $P=0.002$ )
- ▶ Logistic regression analysis supported the R-B treatment effect after adjusting for baseline covariates (odds ratio 4.18, 95% CI 1.77-9.87;  $P=0.001$ )
- ▶ ORRs (based on the investigator's assessment) at the end of rituximab treatment were similar for R-B and R-Clb (91% vs. 86%;  $P=0.304$ )
- ▶ Significant ten-month extension in median PFS was observed with R-B versus R-Clb (39.6 vs. 29.9 months; HR 0.523, 95% CI 0.339-0.806;  $P=0.003$ )
- ▶ Adverse events similar between both groups

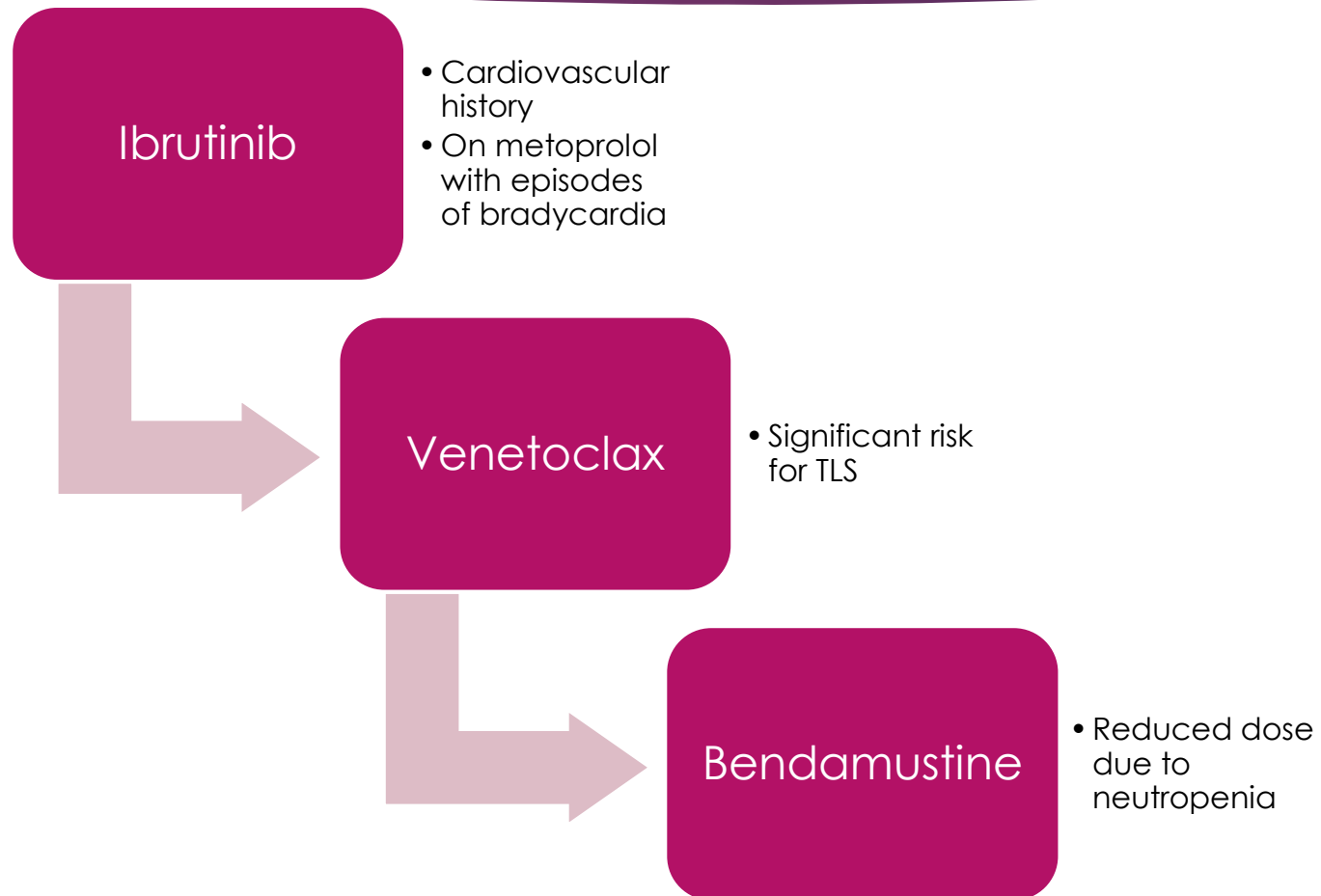
# Patient Case

# Patient Case

- ▶ SS has a history of atrial fibrillation and is rate controlled on metoprolol
  - ▶ Failed cardioversion twice
- ▶ Poor functional status and recent hospitalizations for infections
- ▶ High risk for tumor lysis given his disease burden and significant lymphadenopathy
- ▶ Goal was to start bendumastine and rituximab to de-bulk him and start venetoclax



# Frontline Treatment Regimen



# Summary

- ▶ Ibrutinib is a first line treatment option for CLL
- ▶ Ibrutinib can cause atrial fibrillation in patients with or without a history of prior AF
- ▶ Atrial fibrillation can be managed with both rate and rhythm control if needed
- ▶ Most antiarrhythmics have significant drug interactions with ibrutinib and require dose adjustments if taken concomitantly
- ▶ Venetoclax is an effective first line option, however risk for TLS risk can be challenging
- ▶ Bendamustine is an alternative option in patients who are not candidates for ibrutinib or venetoclax based regimens

# Frontline Management of CLL

IMAN AHMED, PHARM.D

PGY2 HEMATOLOGY/ONCOLOGY PHARMACY RESIDENT

NEWYORK-PRESBYTERIAN HOSPITAL

OCTOBER 8<sup>TH</sup> 2020

# Management of Primary Central Nervous System Post-Transplantation Lymphoproliferative Disorder (PCNS-PTLD)

IMAN AHMED, PHARM.D

PGY1 PHARMACY RESIDENT

NEWYORK-PRESBYTERIAN HOSPITAL

DECEMBER 2, 2019

# Patient Case

- ▶ Chief Complaint: 64 year old female referred for new diagnosis of lymphoma
- ▶ Past Medical History:
  - ▶ Type 2 diabetes mellitus (DM)
  - ▶ Hypertension (HTN)
  - ▶ End stage renal disease status post deceased donor transplant in April 2017 (CMV D-/R+) c/b CMV viremia (s/p Valcyte) and delayed graft function requiring post-transplant HD (last 2017)
- ▶ History of Present Illness: admitted to WCMC via Jamaica Hospital with progressive headaches and left sided weakness on 9/1

# Hospital Course

4

- ▶ Upon arrival to WCMC, patient noted to have right frontal intracranial lesion on imaging requiring right frontal craniotomy on 9/3
- ▶ Findings from pathology from brain tumor resection consistent with B-cell lymphoma
- ▶ Plan
  - ▶ Viral loads and serology sent for EBV, CMV, hepatitis, HIV, and HBV
  - ▶ Obtain whole body PET/CT
  - ▶ Ophthalmology evaluation for ocular involvement
  - ▶ Bone marrow biopsy



Family History: Mother with GI malignancy in 50s and father with DM and HTN

Social History: Quit smoking >30 years ago, minimal alcohol intake, worked as an administrative assistant

Allergies: No known allergies



# Upon Admission to Hematology Service

6

## Vitals:

- ▶ Gen: Morbidly obese, no acute distress
- ▶ Neuro: Alert and oriented x 3. Speech slightly slurred. Right pupil reactive. Left pupil surgically displaced and non-reactive. Left eye deviated laterally (baseline). Decreased sensation to light touch on left upper and lower extremities. Intact sensation on right.
- ▶ HEENT: No oral lesions. Well healing surgical incision with staples in place, no surrounding erythema
- ▶ Neck: No LAD, No JVP
- ▶ CV: Regular rate and rhythm
- ▶ Pulm: Breathing comfortably on RA. No wheezes, or rales
- ▶ Abd: Soft, non-tender, non-distended
- ▶ Extremities: No LE edema. Peripheral pulses intact.
- ▶ Skin: No rashes

## Labs most notable for:

- ▶ K: 5.1
- ▶ Ca: 8.9
- ▶ BUN: 43
- ▶ Creatinine: 1.5
- ▶ WBC 13.8
- ▶ Hgb 10.7
- ▶ Plt 150

# Upon Admission to Hematology Service

7

## Vitals:

- ▶ Gen: Morbidly obese, no acute distress
- ▶ Neuro: Alert and oriented x 3. Speech slightly slurred. Right pupil reactive. Left pupil surgically displaced and non-reactive. Left eye deviated laterally (baseline). Decreased sensation to light touch on left upper and lower extremities. Intact sensation on right.
- ▶ HEENT: No oral lesions. Well healing surgical incision with staples in place, no surrounding erythema
- ▶ Neck: No LAD, No JVP
- ▶ CV: Regular rate and rhythm
- ▶ Pulm: Breathing comfortably on RA. No wheezes, or rales
- ▶ Abd: Soft, non-tender, non-distended
- ▶ Extremities: No LE edema. Peripheral pulses intact. LUE AV fistula
- ▶ Skin: No rashes

## Labs most notable for:

- ▶ K: 5.1
- ▶ Ca: 8.9
- ▶ BUN: 43
- ▶ Creatinine: 1.5
- ▶ WBC 13.8
- ▶ Hgb 10.7
- ▶ Plt 150

Highest SCr was  
1.67 during  
hospital stay

# Home Medications

8

## Immunosuppressive Agents

Prednisone 5mg oral tablet every 48 hours

Tacrolimus 1mg oral capsule, 2 capsules twice daily

Mycophenolate mofetil 1g oral tablet once daily

## Prophylactic Agents

Entecavir 0.5mg oral tablet every 48 hours

Valacyclovir 500mg oral tablet twice daily

Sulfamethoxazole / Trimethoprim DS oral tablet, 1 tablet every 48 hours

## Other Agents

Amlodipine 5mg oral tablet daily

Insulin glargine 18 units subcutaneous injection daily

Novolog flexpen premeal injections before meals

Neurontin 100mg oral capsule three times daily

Atorvastatin 10mg oral tablet daily

Metoprolol succinate ER 25mg oral tablet once daily

# Pathology 9/3

9

- ▶ Right frontal brain tumor:
  - ▶ Extensive necrosis with an atypical inflammatory infiltrate
  - ▶ Variably-sized medium to large, atypical lymphoid cells
  - ▶ Pleomorphic and atypical lymphoid cells with plasmacytoid features
  - ▶ Adjacent inflammatory cells, small lymphocytes and numerous macrophages
- ▶ The large atypical cells diffusely positive for CD20 with partial expression of CD30 on both medium as well as larger atypical lymphoid cells
- ▶ Partial expression of p53

# Pathology 9/3

10

- ▶ The morphologic features, extent of necrosis and LMP1+ positivity were consistent with polymorphic PTLD
- ▶ The association with EBV is compatible with a primary central nervous system PTLD with no evidence of systemic involvement
- ▶ Diagnosis: Epstein-Barr virus positive post-transplant lymphoproliferative disorder

# PET/CT Whole Body 9/10

11

- ▶ Status post right frontal craniotomy for resection of right superior frontal gyrus mass with expected postoperative changes
- ▶ No abnormal focal FDG avidity to suggest residual disease
- ▶ No abnormal FDG avid lymph nodes above or below diaphragm

# Plan

12

9/10: Hold  
mycophenolate  
mofetil and  
continue tacrolimus

9/11: Start  
Rituximab 375  
mg/m<sup>2</sup>

9/15: Start  
methotrexate 1g  
mg/m<sup>2</sup>

# Post-Transplantation Lymphoproliferative Disorder (PTLD)



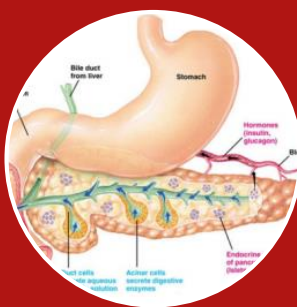
- ▶ PTLD is a heterogeneous disease that commonly occurs in recipients of solid organ transplant (SOT) and hematopoietic stem cell transplant (HSCT)
- ▶ In the last decade there has been an increased incidence of PTLD and is associated with morbidity and mortality
  - ▶ SOT-related mortality up to 50–70%
  - ▶ HSCT-related mortality up to 70–90%
- ▶ The incidence of lymphoma is 20–120% higher in SOT
- ▶ Risk of PTLD depends on type of organ transplant, degree of immune suppression and EBV infection

# Incidence of PTLD

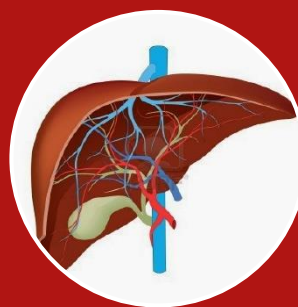
15



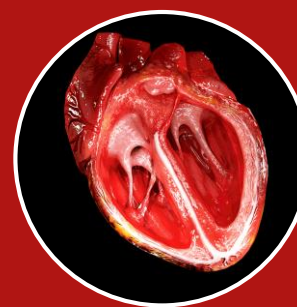
Kidney  
0.8 to 2.5%



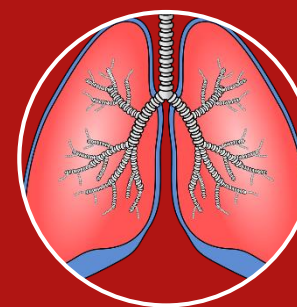
Pancreas  
0.5 to 5.0%



Liver  
1.0 to 5.5%



Heart  
2.0 to 8.0%



Lung  
3.0 to 10.0%



# Reasons for Increased Incidence

16

Increases in  
transplantations

Older donor age  
and recipients

Immunosuppressive  
agents

Improved PTLD  
awareness and  
diagnostic tools

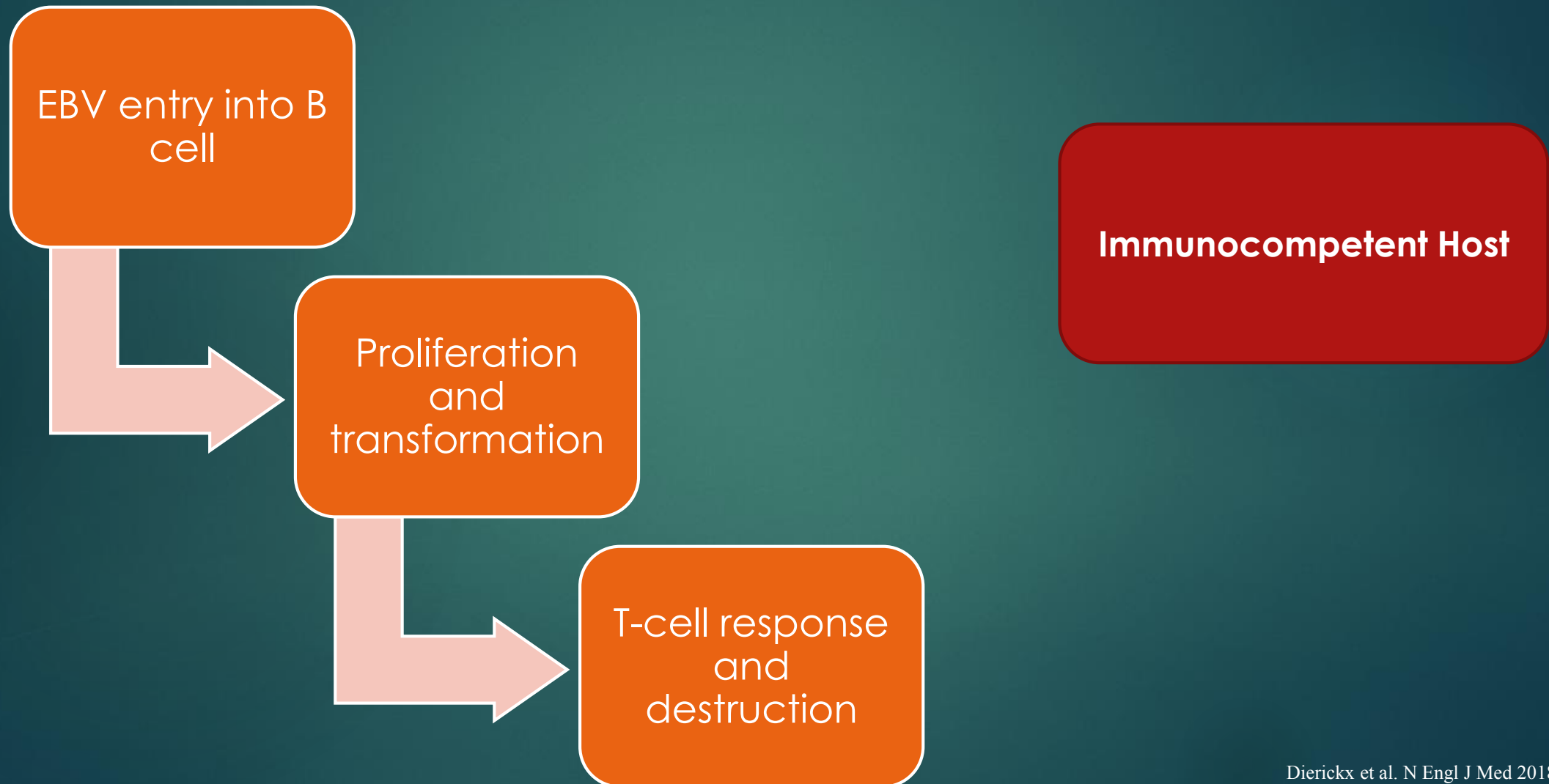
# Clinical Presentation

17

- ▶ Fever
- ▶ Lymphadenopathy
- ▶ Weight loss
- ▶ Anorexia
- ▶ Fatigue
- ▶ Sepsis
- ▶ Multi-organ dysfunction

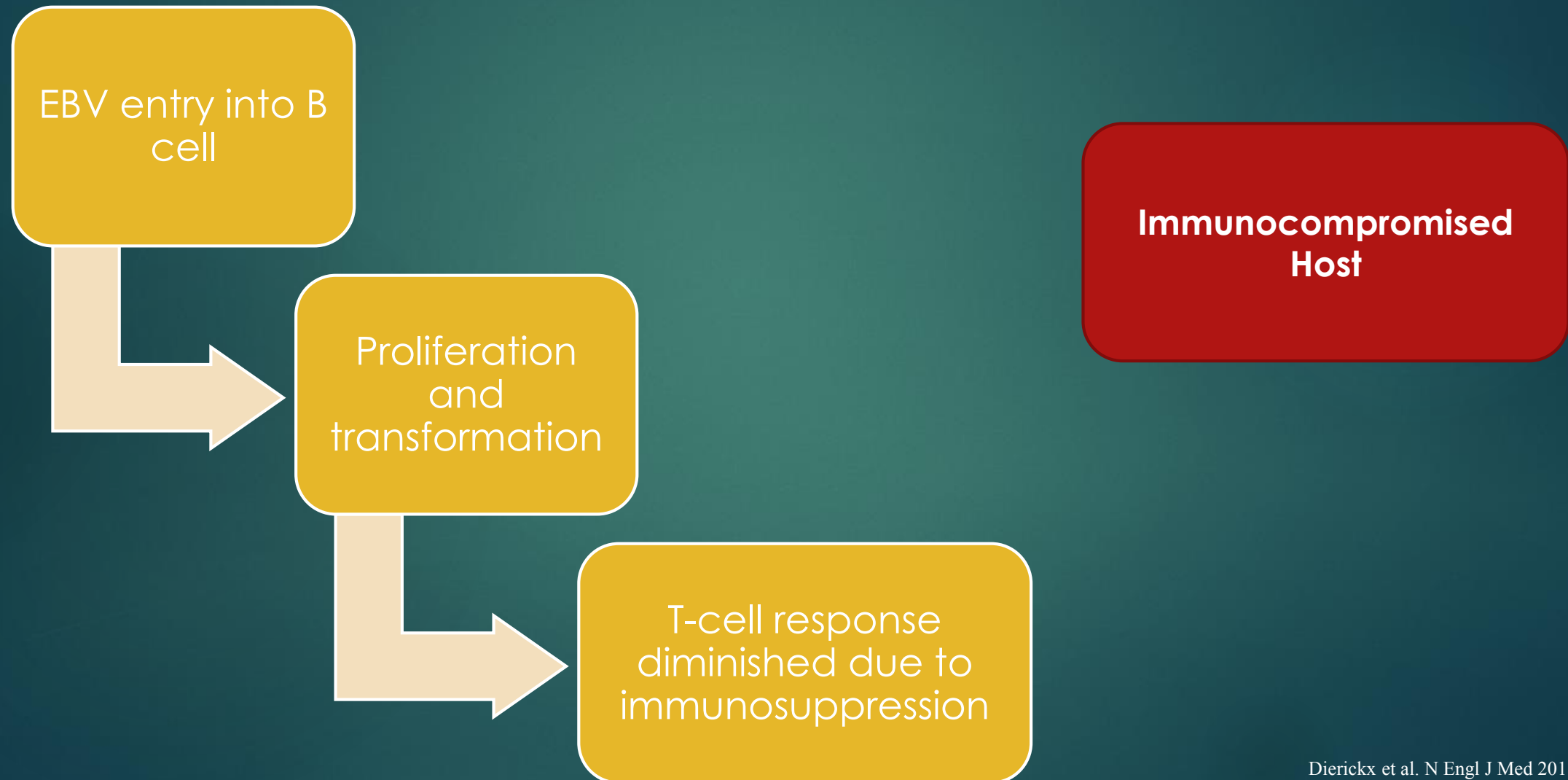
# Pathophysiology- EBV Positive

18



# Pathophysiology- EBV Positive

19



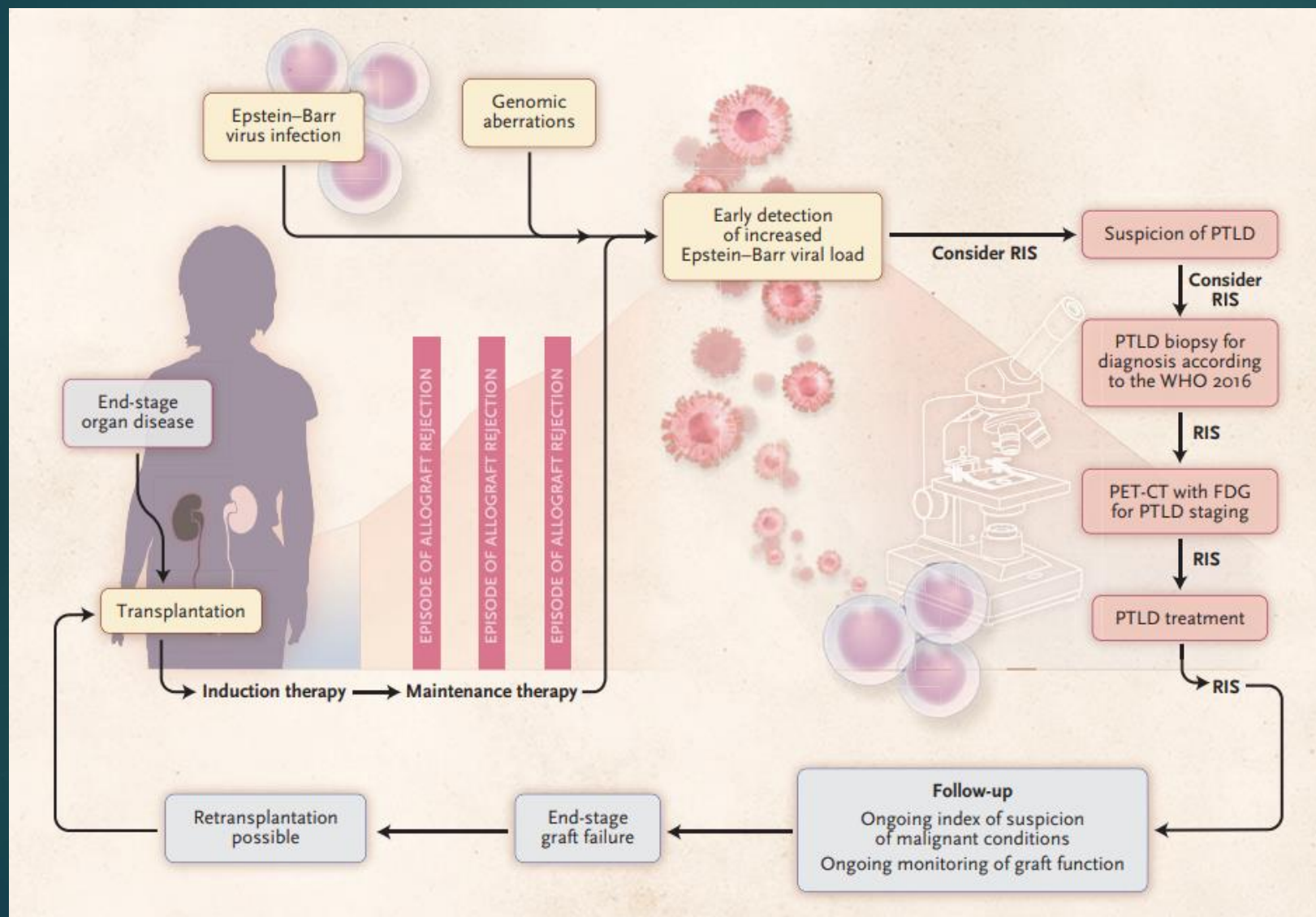
# Pathophysiology- EBV Negative

20

- ▶ Pathogenesis is unclear
- ▶ Potential mechanisms of PTLD include:
  - ▶ Hit-and-run EBV infection
  - ▶ Cytomegalovirus or other viral infections
  - ▶ Persistent antigen stimulation by the graft
  - ▶ Long-term immunosuppression
- ▶ EBV-negative cases have many genomic features consistent with diffuse large B-cell lymphoma in immunocompetent patients
- ▶ Unique features of this include late onset PTLD and poorer response to therapy

# Pathophysiology

21





# World Health Organization (WHO) Classification 2017

22

- ▶ The 2017 World Health Organization classification breaks down PTLD into six subclasses
- ▶ Three forms are classified as non-destructive PTLD and are called plasmacytic hyperplasia, infectious mononucleosis-like PTLD, and follicular hyperplasia
- ▶ The other forms are classified as destructive PTLD and are called polymorphic PTLD, monomorphic PTLD, and classic Hodgkin lymphoma-like PTLD

# World Health Organization (WHO) Classification

23

	Nondestructive PTLD	Polymorphic PTLD	Monomorphic PTLD	Hodgkin's Lymphoma like- PTLD
Composition	Plasma cells, small lymphocytes, immunoblasts	Complete spectrum of lymphoid maturation (immunoblasts, plasma cells and small to medium B-cell and T-cell lymphocytes)	Non-Hodgkins lymphoma	Classic Hodgkin's lymphoma
Immunohistochemical Features	No diagnostic value	Mixture of B cells and T cells	Monoclonal population 90% DLBCL, mostly CD20+ (majority ABC type)	CD20-, CD30+; most cases CD15+
EBV Association	Almost 100%	>90%	Both EBV-positive and EBV-negative	>90%

# World Health Organization (WHO) Classification

24

	Nondestructive PTLD	Polymorphic PTLD	Monomorphic PTLD	Hodgkin's Lymphoma like- PTLD
Composition	Plasma cells, small lymphocytes, immunoblasts	Complete spectrum of lymphoid maturation (immunoblasts, plasma cells and small to medium B-cell and T-cell lymphocytes)	Non-Hodgkins lymphoma	Classic Hodgkin's lymphoma
Immunohistochemical Features	No diagnostic value	Mixture of B cells and T cells	Monoclonal population 90% DLBCL, mostly CD20+ (majority ABC type)	CD20-, CD30+; most cases CD15+
EBV Association	Almost 100%	>90%	Both EBV-positive and EBV-negative	>90%

# Primary Central Nervous System Post-Transplantation Lymphoproliferative Disorder (PCNS-PTLD)

# PCNS-PTLD

26

- ▶ PCNS-PTLD is a rare complication that develops within months to years after solid organ transplant
- ▶ First reported in 1970 and only 45 patients reported through case series until 2010
- ▶ Up to 20% of PTLD cases involve the central nervous system
- ▶ The second most common extranodal involvement in PTLD patients
- ▶ PCNS-PTLD is frequently polymorphic, B-cell in origin and positive for EBV infection in up to 70% cases

# Clinical Presentation

27

- ▶ Headache
- ▶ Ataxia
- ▶ Aphasia
- ▶ Seizures
- ▶ Hemiparesis
- ▶ Altered mental status

# Diagnosis

28

- ▶ Histology
- ▶ Imaging
  - ▶ Magnetic resonance imaging (MRI)
  - ▶ Computed tomography (CT)
  - ▶ Positron emission tomography (PET)
- ▶ Biopsy
- ▶ Cerebral spinal fluid

# Differential Diagnosis

29

Primary CNS  
Lymphoma

Glioblastoma

Metastatic  
Disease

Abscess

Opportunistic  
Infections



# Treatment

# Reduction in Immunosuppression (RI)

32

- ▶ Reduction of immunosuppressive agents is first line in PCNS-PTLD management
- ▶ In EBV positive patients, this allows for host cytotoxic T lymphocyte function to be restored and elimination of virally infected lymphocytes
- ▶ No standard exists for which agents to reduce initially
  - ▶ Reduction of cyclosporine or tacrolimus by 50% and discontinuing azathiopine or mycophenolate mofetil is often recommended
- ▶ It is important to balance risk vs benefit in patients with high allograft rejection

# Response to RI

33

- ▶ Response to reduction in immunosuppression is seen 2-4 weeks
- ▶ Up to 25%–50% of adult patients respond to reduction in immunosuppression alone
- ▶ Most patients with early lesions or polymorphic PTLD have complete regression of disease
- ▶ Monomorphic PTLD have lower rates of response
- ▶ Patients who fail to respond adequately to RI are associated with high mortality rates (up to 90%)

# Reduction of Immunosuppression as Initial Therapy for Post-Transplantation Lymphoproliferative Disorder

34

- ▶ Tsai et al. investigated the effectiveness of reduction in immunosuppression as initial therapy in 42 adult patients
- ▶ A retrospective study at the University of Pennsylvania Medical Center that evaluated all patients who were diagnosed with PTLD and treated with RI as initial therapy
- ▶ Patients who had concurrent or previous chemotherapy, interferon, monoclonal antibodies, or radiation therapy were excluded from the analysis
- ▶ Between 1966-1999 at University of Pennsylvania
- ▶ N=42
  - ▶ RI monotherapy: n=30
  - ▶ RI plus surgical resection: n=12

# Response to RI Monotherapy

36

	Response n (%)
<b>Overall Response</b>	19/30 (63%)
<b>Complete Response</b>	11/30 (37%)
<b>Partial Response</b>	8/30 (27%)
<b>Stable Disease</b>	3/30 (10%)
<b>Progressive Disease</b>	8/30 (27%)

# Reduction of Immunosuppression as Initial Therapy for Post-Transplantation Lymphoproliferative Disorder

37

- ▶ Reshef et al. investigated the efficacy, safety and predictors of response to RI in adult patients with PTLD
- ▶ Primary endpoint was outcome of the initial step in the management of PTLD- withdrawal of immunosuppression
- ▶ Between 1988-2008 at University of Pennsylvania
- ▶ Intervention:
  - ▶ RI monotherapy: n=67
  - ▶ Surgical excision plus adjuvant RI: n=30
  - ▶ Other first line therapies with or without RI: n=51

# Response to RI Monotherapy

38

	Response n (%)
Overall Response	28/62 (45%)
Complete Response	23/62 (37%)
Partial Response	5/62 (8%)
Stable Disease	11/62 (18%)
Progressive Disease	23/62 (37%)
Unknown	5

# Allograft Outcome

39

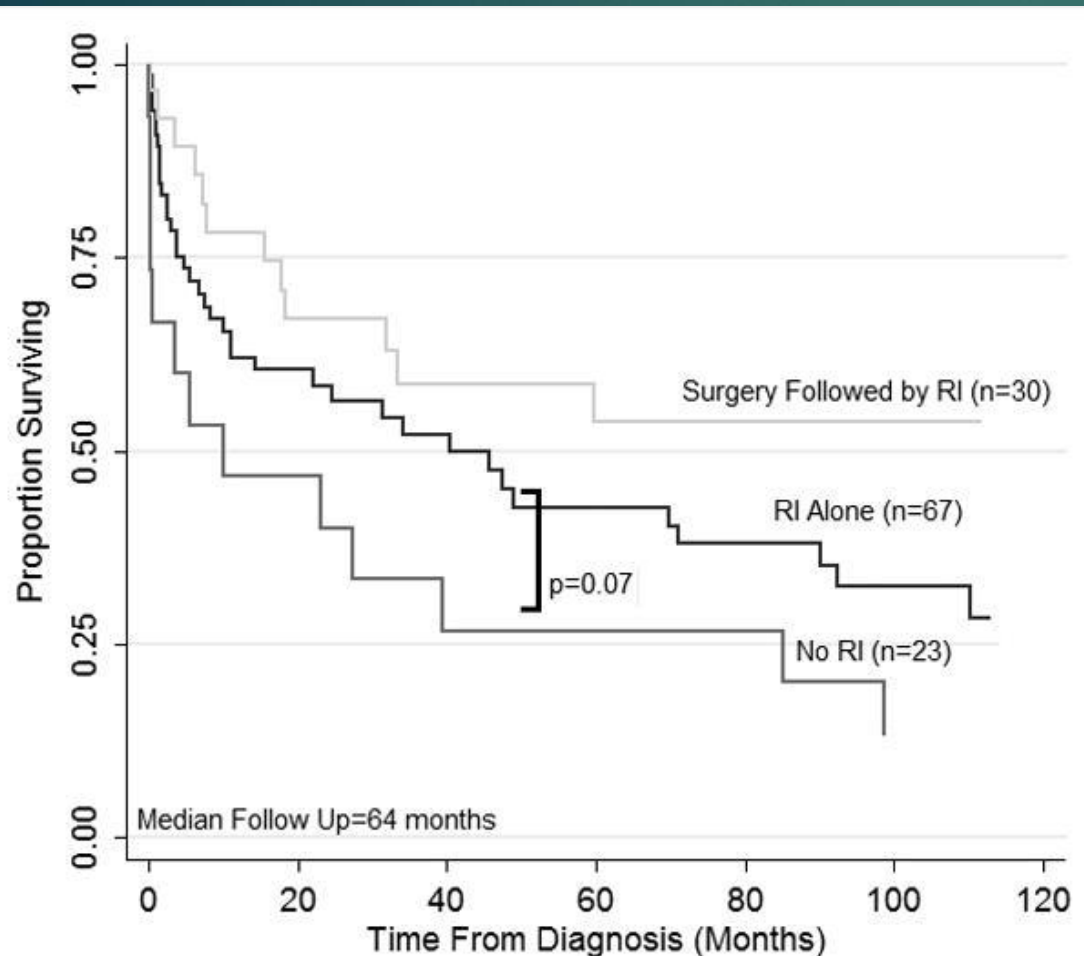
Regimen	Incidence of Acute Graft Rejection
RI alone	20/50 (40%)
Surgery followed by adjuvant RI	4/16 (25%)*
RI + rituximab	5/11 (45%)
RI + cytotoxic chemotherapy	3/24 (17%)
Any RI containing 1 <sup>st</sup> -line Regimen	32/101 (32%)

\*Out of patients who did not undergo surgical removal of the graft.



# Overall Survival

40



- ▶ The median follow-up was 64 months
- ▶ The median survival for patients treated with RI alone was 44 months (3-year OS, 55%)
- ▶ The median survival for patients treated with adjuvant RI was not reached (3-year OS, 65%)

# Rituximab

41

- ▶ Rituximab is well established as effective treatment for PTLD
- ▶ It is a monoclonal antibody targeting the CD20 positive antigen on the surface of B-lymphocytes
- ▶ Dosed 375 mg/m<sup>2</sup> weekly or once every cycle

# Effect of Anti-CD 20 Antibody Rituximab in Patients with Post-Transplant Lymphoproliferative Disorder (PTLD)

42

- ▶ Oerteel et al. conducted a phase II open multicenter trial investigating rituximab as monotherapy in PTLD patients
- ▶ Between 1999-2002
- ▶ Intervention
  - ▶ N=17
  - ▶ Rituximab 375 mg/m<sup>2</sup> once weekly for 4 weeks (days 1, 8, 15, 22)
  - ▶ All patients had reduction of immunosuppression prior into the study

# Study Results

43

	Response n (%)
Complete Response	9 (53%)
Partial Response	3 (18%)
Stable Disease	4 (24%)
Progressive Disease	1 (6%)

# Treatment of PTLD with Rituximab or Chemotherapy

44

- ▶ Elstrom et al. conducted a retrospectively review to evaluate patients receiving rituximab and/or chemotherapy for PTLD for response, time to treatment failure (TTF) and overall survival (OS).
- ▶ Between 1996-2005 at the University of Pennsylvania
- ▶ Of 117 patients treated for PTLD only 35 (30%) met criteria for inclusion which was having undergone treatment with single-agent rituximab, chemotherapy or both.
- ▶ Intervention
  - ▶ N=35
  - ▶ Rituximab 375 mg/m<sup>2</sup> once weekly for 4 weeks (days 1, 8, 15, 22)
  - ▶ Chemotherapy

# Response

45

	Rituximab n (%)	Chemotherapy n (%)
Overall Response Rate	15/22 (68)	17/23 (74)
Complete Response	13/22 (59)	13/23 (57)
Partial Response	2/22 (9)	4/23 (17)
Progressive Disease	6/22 (27)	5/22 (23)

# Rituximab's CNS Penetration

46

- ▶ Monoclonal antibody directed against the CD20 antigen on the surface of B-lymphocytes
- ▶ Adequate activity in systemic CD20-positive cells, but efficacy for CNS treatment is unknown
- ▶ Rituximab concentrations in CSF are 0.1% of plasma levels when it is administered at a standard IV dose of 375 mg/m<sup>2</sup>
- ▶ Low penetration across the blood brain barrier potentially due to being large molecule

# Literature Review of PCNS-PTLD



# Primary Central Nervous System Post-Transplantation Lymphoproliferative Disorder: An International Primary Central Nervous System Lymphoma Collaborative Group Report

- ▶ Authors reviewed the databases of participating institutions of the International Primary CNS Lymphoma Collaborative Group for cases of PCNS-PTLD
- ▶ 34 patients with PCNS-PTLD without evidence of systemic PTLD were investigated retrospectively
- ▶ PCNS-PTLD definitions: a lymphoproliferative disorder of the CNS without evidence of systemic PTLD in patients who previously underwent solid organ transplantation and had histologic confirmation
- ▶ The time from transplantation to the diagnosis of PCNS-PTLD was 4.4 years
- ▶ Interventions varied from radiotherapy, systemic chemotherapy, and rituximab either alone or in combination
  - ▶ Most patients had reduction of immunosuppression

# Initial Treatment of PCNS-PTLD

49

Treatment	No. of Patients
<b>Corticosteroid dosage</b>	
Increased	17
Stable	8
Decreased	4
<b>Immunosuppression</b>	
Decreased	25
Stable	6
Unknown	3
<b>Antivirals initiated</b>	8

Treatment	No. of Patients
<b>Systemic chemotherapy</b>	10
Methotrexate (combination or single agent)	7
Temozolomide	2
CHOP	1
<b>Intrathecal chemotherapy</b>	
Yes	5
No	17
Unknown	12
<b>Radiation therapy</b>	8

# Study Results

50

Treatment	Patients Alive at Last Follow-Up		Radiographic Responses
	N	Median Survival (range), mo	
Rituximab without chemotherapy or Radiotherapy N=8	7	23.4 (4.0–55.6)	CR, 6; PR, 2
Rituximab ± other therapies* N=14	9	23.6 (4.0–55.6)	CR, 7; PR, 6; PD, 1

CR: Complete Response; PR: Partial Response; SD: stable Disease; PD: Progressive Disease

\*In addition to rituximab, 3 patients received systemic chemotherapy without radiation, 2 patients received systemic chemotherapy and radiation, and 1 patient received radiation without systemic chemotherapy

# Primary CNS Post-transplant Lymphoproliferative Disease (PTLD): An International Report of 84 Cases in the Modern Era

- ▶ Multicenter, retrospective analysis of solid organ transplant patients diagnosed with PCNS-PTLD between 1997-2010
- ▶ Diagnosis was confirmed by brain biopsy
- ▶ The median time from transplantation to PCNS-PTLD diagnosis was 54 months
- ▶ Interventions varied from radiotherapy, systemic chemotherapy, and rituximab either alone or in combination

# Initial Treatment of PCNS-PTLD

52

Therapy/regimen	Number	%
<b>Chemotherapy</b>		
HD-MTX	11	13
HD-MTX + HDAC	10	11
HDAC	8	10
Cyclophosphamide monotherapy	1	1

HD-MTX: High Dose Methotrexate, HD-MTX+HDAC: High Dose Methotrexate+High Dose Cytarabine, HDAC: High Dose Cytarabine, WBRT: Whole Brain Radiotherapy

Therapy/regimen	Number	%
<b>Rituximab-based therapy (intravenous)</b>		
Rituximab and HD-MTX	12	14
Rituximab and WBRT	8	10
Rituximab monotherapy	8	10
Rituximab + HD-MTX + HDAC	7	8
Rituximab and HDAC	3	4

# Study Results

53

	Response n (%)
Overall Response Rate (ORR)	50/84 (60%)
Complete Response	32/84 (38%)
Partial Response	18/84 (21%)
Progressive Disease	27/84 (32%)

# Study Results

54

- ▶ HD-MTX and/or HDAC-based therapy had highest rates of ORR and CR
- ▶ The median PFS was 8 months (95% CI 3–21)
- ▶ The median OS was 17 months (95% CI 5–33)

Treatment First-Line	HD-MTX	Without HD-MTX
ORR/CR Rates, %	63%/45%	57%/32%

Treatment First-Line	Rituximab	Without Rituximab
ORR/CR Rates, %	63%/47%	57%/30%

Treatment First-Line	HDAC	Without HDAC
ORR/CR Rates, %	72%/53%	53%/31%

# Patient Case



# RM's Treatment

56

- ▶ Initial step: reduction of immunosuppression
  - ▶ Discontinued mycophenolate mofetil
- ▶ Started weekly rituximab
  - ▶ Dose: 375 mg/m<sup>2</sup>
- ▶ Started methotrexate
  - ▶ Dose: 1g mg/m<sup>2</sup>

# Was RM's Treatment Appropriate?

57

- ▶ Optimal treatment is not well defined due to lack of randomized controlled trials and heterogeneity of the disease
- ▶ The strongest evidence supports the initial step of managing PCNS-PTLD with reduction of immunosuppression with retrospective and prospective studies showing high complete response rates
- ▶ Rituximab monotherapy in PTLD has been well established with numerous prospective studies showing favorable responses, however the use in PCNS-PTLD is not completely understood. The stepwise approach of RI first, then rituximab has more data to support its favorable use in PCNS-PTLD compared to monotherapy
- ▶ The use of methotrexate is limited to retrospective studies, however there is some benefit for patients with PCNS-PTLD

# Management of Primary Central Nervous System Post-Transplantation Lymphoproliferative Disorder (PCNS-PTLD)

IMAN AHMED, PHARM.D

PGY1 PHARMACY RESIDENT

NEWYORK-PRESBYTERIAN HOSPITAL

DECEMBER 2, 2019

## **Clinical Case Examples (During Program Interviews)**

## Case

**Chief Complaint:** Productive cough, difficulty breathing, and subjective fevers

**History of Present Illness:** WW is a 66 yo AA female admitted yesterday to the floor with a 2 day history of fever, productive cough, and chest pain. Additionally, her husband mentions increasing somnolence over the last week. She denies vomiting and diarrhea and has no recent history of travel.

### Past Medical History:

Diabetes, type II

Glaucoma

Atrial fibrillation

Hypertension

### Home medications:

Glipizide 10 mg orally twice daily

Lisinopril 10 mg orally daily

Metformin 500 mg orally twice daily

Multivitamin 1 tablet orally daily

Aspirin 81 mg orally daily

Latanoprost 1 drop into both eyes once daily in

Rivaroxaban 20 mg orally daily

the evening

### Allergies:

Penicillin (rash); patient has tolerated cephalexin in the past

### Physical Exam:

Temp: 38.2 C HR: 90 RR: 32 BP: 165/98 O2 sat: 95% on room air

Weight 87 kg, height 5'4"

General: Comfortable, sitting up in bed with no acute distress

HEENT: Dry mucus membranes, PERRLA, EOMI, neck supple and without thyromegaly

Lungs: Decreased breath sounds in the LLL

CV: Normal S1/S2, (+) S3, no rub, murmur, or gallop

Abdomen: Normoactive bowel sounds, soft, nontender

Skin: Warm and dry

Neuro: Awake and oriented x3

### Laboratory Data:

143	110	45	318
4.8	24	1.4	

14.5	15	253
	39	

CXR: LLL consolidation

Urine analysis: Specific gravity 1.018, (2+) protein, (-) ketones, (-) glucose, (-) blood, (-) nitrite, (-) leukocyte esterase, (-) bacteria, (-) RBC, 4 WBC

Urine culture: negative to date

Induced sputum culture: gram positive cocci in chains

Legionella urine antigen: pending

Atypical bacteria respiratory panel: pending  
Blood culture: No growth to date (at 24H)

**Current admission orders are:**

0.9% sodium chloride @ 100 mL/h  
Vancomycin 1000 mg IV q12h  
Levofloxacin 500 mg IV daily  
Azithromycin 500 mg IV daily  
Glipizide 10 mg orally twice daily  
Metformin 500 mg orally twice daily  
Lisinopril 10 mg orally daily  
Multivitamin 1 tablet orally daily  
Heparin 5,000 IU subcutaneously three times daily

1. What infection are you concerned for in WW?

2. What antibiotics would you recommend for this patient? What, if anything would you change with the patient's current regimen?

3. The sputum culture ultimately grows *Streptococcus pneumoniae* (susceptible to penicillin, clindamycin, vancomycin). *Legionella* urine antigen and atypical respiratory panel are negative. Based on your answer above, how would you modify the regimen now?

4. The patient is tolerating orals well and is ready to be discharged home. Her husband notes that she sometimes forgets to take her pills but they will "try their best." What would you recommend?

## Case

**Chief Complaint:** Productive cough, difficulty breathing, and subjective fevers

**History of Present Illness:** WW is a 66 yo AA female admitted yesterday to the floor with a 2 day history of fever, productive cough, and chest pain. Additionally, her husband mentions increasing somnolence over the last week. She denies vomiting and diarrhea and has no recent history of travel.

### Past Medical History:

Diabetes, type II

Glaucoma

Atrial fibrillation

Hypertension

### Home medications:

Glipizide 10 mg orally twice daily

Lisinopril 10 mg orally daily

Metformin 500 mg orally twice daily

Multivitamin 1 tablet orally daily

Aspirin 81 mg orally daily

Latanoprost 1 drop into both eyes once daily in

Rivaroxaban 20 mg orally daily

the evening

### Allergies:

Penicillin (rash); patient has tolerated cephalexin in the past

### Physical Exam:

Temp: 38.2° C HR: 90 RR: 32 BP: 165/98 O2 sat: 95% on room air

Weight 87 kg, height 5'4"

General: Comfortable, sitting up in bed with no acute distress

HEENT: Dry mucus membranes, PERRLA, EOMI, neck supple and without thyromegaly

Lungs: Decreased breath sounds in the LLL

CV: Normal S1/S2, (+) S3, no rub, murmur, or gallop

Abdomen: Normoactive bowel sounds, soft, nontender

Skin: Warm and dry

Neuro: Awake and oriented x3

### Laboratory Data:

143	110	45	318
4.8	24	1.4	

14.5	15	253
	39	

CXR: LLL consolidation

Urine analysis: Specific gravity 1.018, (2+) protein, (-) ketones, (-) glucose, (-) blood, (-) nitrite, (-) leukocyte esterase, (-) bacteria, (-) RBC, 4 WBC

Urine culture: negative to date

Induced sputum culture: gram positive cocci in chains

Legionella urine antigen: pending

Atypical bacteria respiratory panel: pending  
Blood culture: No growth to date (at 24H)

**Current admission orders are:**

0.9% sodium chloride @ 100 mL/h  
Vancomycin 1000 mg IV q12h  
Levofloxacin 500 mg IV daily  
Azithromycin 500 mg IV daily  
Glipizide 10 mg orally twice daily  
Metformin 500 mg orally twice daily  
Lisinopril 10 mg orally daily  
Multivitamin 1 tablet orally daily  
Heparin 5,000 IU subcutaneously three times daily

1. What infection are you concerned for in WW?

**Community acquired pneumonia**

2. If I told you the most common pathogens in this infection include *Streptococcus pneumoniae* and atypicals (technically also some gram negatives such as *Haemophilus influenza* and *Moraxella catarrhalis* but not of concern for exam purposes), what would you recommend for this patient? What, if anything would you change with the patient's current regimen?

**D/c vancomycin (no need for MRSA coverage since we know patient has *Streptococcus pneumoniae* in the sputum and low risk given community-acquired)**

**Change levofloxacin to a beta-lactam (ie Ceftriaxone) and continue azithromycin**

**Notes: Typically every institution has guidelines for empiric therapy. Most common reg is CTX + Azithro/Doxy, or LVQ alone if PCN allergic. No need double coverage of CTX + LVQ.**

3. The sputum culture ultimately grows *Streptococcus pneumoniae* (susceptible to penicillin, clindamycin, vancomycin). *Legionella* urine antigen and atypical respiratory panel are negative. Based on your answer above, how would you modify the regimen now?

**Discontinue azithromycin (or other atypical coverage)—Three classes that cover atypicals: macrolides, FQ, TCN; may consider narrowing beta-lactam from ceftriaxone**

4. The patient is tolerating orals well and is ready to be discharged home. Her husband notes that she sometimes forgets to take her pills but they will "try their best." What would you recommend?

**Change to PO beta-lactam (i.e. Cefuroxime 500 q12h), to complete 5 day course (important to define duration and narrow). May take tolerability, adverse effects (i.e., prefer beta-lactam over clinda due to adverse effects, higher risk *C. diff*), frequency of administration into account (for example, cephalexin is q6h). Penicillin rash so may avoid penicillin but not contraindication to try other beta-lactams**



## Supplemental Essays



**Emory University Hospital**  
**PGY1/PGY2 Pharmacy Residency Supplemental Application Materials**

Please complete the following questions and submit via PhORCAS.  
Your application will not be considered complete without the supplemental application.

1. A PGY1 or PGY2 residency enables pharmacists to gain skills sets and knowledge beyond those provided by a doctor of pharmacy program. Besides increasing disease state and pharmacotherapy knowledge, what are three specific goals you have for yourself that you hope to achieve through a residency at Emory?

Three specific goals I hope to achieve through a residency at Emory are to develop a teaching philosophy, become a board certified clinical pharmacy specialist, and complete an impactful quality improvement project that influences Emory's pharmacy practice.

As I progress into my career, I hope to mentor and teach pharmacy students. Through the affiliation with Mercer Southern School of Pharmacy and the University of Georgia, I will be able to precept fourth-year pharmacy students. This will help build my leadership and presentation skills as a resident. Through grand rounds, journal club presentations, and preceptorship, I can build a teaching philosophy that I can apply after completing my residency. The unique opportunity to complete a pharmacy teaching certificate offered by Mercer University College of Pharmacy is a great avenue to hone on my teaching skills. I look forward to the opportunity to pay it forward to the profession by advising future pharmacist. I have an underlying interest in teaching pharmacy students as I progress into my career and I look forward to learning more about teaching practices.

Through Emory's residency, I hope to gain a new level of confidence in my decision-making skills to become an independent practitioner. As a resident, I will be afforded the opportunity to lead healthcare teams in recommending medication therapy plans and serving as a resource for drug information questions. This learning experience will allow me to be independent and build on my clinical skills. As I complete my residency and progress into my career, this will be extremely beneficial as I hope to utilize my training to become a board certified clinical pharmacy specialist.

Research is an important mechanism to optimize patient care. It serves as an important tool to identify areas of improvement and how to best advance patient care. As a resident, I am excited to complete a research project focused on patient care improvement. I think this is a great opportunity to work with healthcare providers and staff to implement practices to improve healthcare delivery. This is also valuable as I will be able to build on my research skills and publishing opportunity.

# EMORY

## HEALTHCARE

Everyone has mentors that help develop them as not only practitioners, but professionals. Describe a pharmacist you have worked with who you see as a role model for excellent pharmacy practice.

The most inspiring pharmacist that serves as my role model is Dr. Monika Daftary. Her ability to practice as more than a clinical pharmacist is encouraging. Perhaps it is her ability to tackle medical care with social determinants of health. When seeing patients in her ambulatory care clinic she not only addresses medical questions, but also works with patients on transportation, housing, and social concerns. In addition, Dr. Daftary has built a trustworthy and credible rapport with other healthcare providers and staff. Her relationships with colleagues are admirable, as I have witnessed her create therapy plans with physicians, rearrange workflow with nurses, and work with case managers to build sustainable living environments for patients. Dr. Daftary is also welcoming to students and their various learning styles, in which she carefully pushes students to perform at their highest potential. Dr. Daftary has a good work-life balance. She is an inspiring clinical pharmacist and an example of one who has excellent pharmacy practices.

2. Unfortunately, the profession of pharmacy is faced with a number of challenges, both internally and externally. What do you feel is the biggest problem confronting the practice of pharmacy today?

Fortunately, the roles of a pharmacist have expanded exponentially. Pharmacists are taking on more responsibilities that place pharmacists at the forefront of patient care. The integration of clinical pharmacists in various medical specialties has shown enormous benefit in improving patient outcomes. However, the recognition of pharmacists as providers in the healthcare system is not yet maximized. Through my leadership in the American Pharmacists Association-Academy of Student Pharmacists, I collaborated with leaders of various student organizations and the Washington DC Pharmacy Association (WDCPhA), to spear head a letter writing campaign in order to support the DC Collaborative Practice Agreement (CPA). The goal was to create a historic advocacy campaign to increase local awareness of the expanded roles of pharmacists and how patient care can improve through CPA. We managed to reach 245 student pharmacists and 37 faculty members to create push forward the decision-making process that is coordinated by the Department of Health Office of General Counsel. This unique effort goes hand in hand to advance the provider status efforts and enhanced my passion advocacy work. Through the constant work to gain provider status, the ability for pharmacists to provide optimal access to patients will be heightened. As the landscape of pharmacy practice broadens and the advocacy efforts for provider status increase, the future of pharmacy will be magnified.

**Reflecting on your APPE rotations, please provide a piece of critical feedback you have received from one of your preceptors on a direct patient care rotation. Explain how you have incorporated this feedback into your practice and/or worked to improve in**

From the various advanced pharmacy practice experiences (APPE) I have had, I learned the most from my critical care rotation. For five weeks I rounded with interdisciplinary teams, made medication therapy recommendations, and led topic discussions. My preceptor found that providing students with critical feedback was important for their learning experience. For this reason, feedback from my preceptor was constant and allowed me to continuously improve during my rotation. In the surgical intensive care unit (SICU), patients were critically ill with a multitude of complex medical conditions. Each day, I had the task of working up patients prior to rounds, in which I had a list of abnormal lab results with potential causative agents and recommendations. However, one critical feedback I received was that “in the SICU it is important not to chase after each abnormal lab result.” From this feedback, I learned that in patients who are critically ill certain lab results might be higher or lower than normal. However, it is important to understand that this can change daily or be due to recent procedures. Ultimately the key to being a successful clinical pharmacist is to understand what is urgent and what is not. I found this critical feedback to be most helpful as I finished my critical care rotation and even as I progressed through other clinical rotations. It is important to look at laboratory trends, understand underlying pathophysiology, and the complexity of critically ill patients in order to make sound clinical decisions. After receiving this feedback, I incorporated this into my daily patient assessments and even received positive feedback from my preceptor on my ability to prioritize urgent matters. In my later infectious disease rotation, I utilized the same feedback as I assessed and recommended therapy plans for patients with viral and bacterial infections. This critical feedback is one I greatly appreciate as I progress into my career as a clinical pharmacist.

## UNC Hospitals Department of Pharmacy

### Supplemental Information needed for PGY1 pharmacy residency application

Please answer the following 4 questions (***\*all are required***). Limit the total space to 2 pages, using no less than 11 point font and 1 inch margins.

1. Tell us why you have decided to pursue this program and what you hope to gain from residency training.

The University of North Carolina (UNC) Medical Center PGY-1 pharmacy practice residency offers a variety of rotations, research, and teaching experiences that align with my career goals and clinical areas of interest, including infectious disease and oncology. I am most excited about the resources and opportunities provided to residents. As an academic medical center, your program will allow me to acquire the necessary skills to be a clinical leader and educator. UNC is unique in the numerous clinical preceptors available that showcase the robust program I hope to learn from. Through UNC's PGY-1 pharmacy practice residency, I hope to gain a new level of confidence in my decision-making skills to become an independent practitioner. The diverse rotations and supportive environment as a resident will afford me the opportunity to build relationships and mentorships with established clinical pharmacists. This will be extremely beneficial as I further my career. Lastly, I hope to develop a teaching philosophy. I have an underlying interest in teaching pharmacy students as I progress into my career and I look forward to learning more about teaching practices.

2. Describe one of your most recent interventions on rotations, and what you learned from the experience.

In my infectious disease ambulatory care rotation, I came across a patient who was diagnosed with chronic hepatitis C. The patient previously completed treatment with Harvoni® but failed treatment due to resistance. The patient developed resistance to NS5A VAR L93H and L31M, and after further assessment and guideline recommendations, the next treatment options were Vosevi® or Mavyret™. However, the patient had difficulty swallowing and explained that he could not take either of the therapy options. I was tasked to recommend a medication therapy plan for this patient. Both Vosevi® and Mavyret™ have only been studied in the oral formulation and are not available as an oral solution. After thorough research, there was no pharmacokinetic



data to support crushing or splitting Vosevi<sup>®</sup>. However, a recent phase 1 study evaluated the effect of Mavyret<sup>™</sup> in various formulations by crushing, cutting in half, or grinding into powder. The results of this study show that when cutting Mavyret<sup>™</sup> into half there were minimal differences in exposure compared to the whole tablet. Based on this limited data, I recommended splitting Mavyret<sup>™</sup> in half for this patient who was having difficulty swallowing. I provided my recommendation along with monitoring parameters to assess the effectiveness of this regimen to the attending and clinical pharmacist. I then consulted the patient who also agreed to start therapy. Through this intervention, I learned that there will be times when pharmacists will be asked to provide a recommendation where little medical guidance is provided. With adequate research and clinical assessment, optimal clinical decisions can be made for patients.

3. Describe your short term and long term goals.

My immediate goal is to become a PGY-1 pharmacy practice resident with the long-term intention of practicing in a multidisciplinary setting where I can deliver excellent patient care. During my residency, I hope to diversify my clinical scope through various clinical specialties and practice opportunities. After completing my PGY-1 residency, I plan to continue my training in a PGY-2 residency focused on oncology and become a board certified oncology pharmacist. Through this additional training and clinical foundation, I aspire to be a clinical pharmacist practicing in a robust cancer center. In my responsibilities, I hope to bridge oncology, infectious disease, and supportive care in order to provide the best patient care.

4. Briefly describe a mentor in your professional development.

The most inspiring pharmacist that serves as my mentor is Dr. Monika Daftary. Her ability to practice as more than a clinical pharmacist is motivating. Through her mentorship, I have gained the ability to tackle medical care with social determinants of health. When seeing patients in her ambulatory care clinic she taught me to not only discuss medical concerns, but to also work with patients on transportation, housing, and social concerns. Dr. Daftary has built a trustworthy and credible rapport with other healthcare providers and staff. Her relationships with colleagues are admirable, as I have witnessed her create therapy plans with physicians, rearrange workflow with nurses, and work with case managers to build sustainable living environments for patients. Dr. Daftary is also welcoming to students and their various learning styles in which she carefully pushes students to perform at their highest capabilities. In addition, Dr. Daftary, has enhanced my professional development by challenging me to perform at my highest potential. She has shared valuable advice about good work-life balance, how to be a continuous learner, and ultimately practice with excellent patient care.

# Orientation Slides for Preceptors



# REACHING RESIDENCY

INCREASING REPRESENTATION OF BLACK PHARMACY RESIDENTS





# AGENDA

- Introduction
- The “Why”
- Goals of the program
- Structure of the program
- Questions

# THE TEAM



- Ijeoma Ekeocha, PharmD
  - Doctor of Pharmacy from University of the Sciences, formally known as Philadelphia College of Pharmacy
  - Completed PGYI Non-Traditional pharmacy residency at The Johns Hopkins Hospital
  - Clinical Pharmacy Manager of Specialty Pharmacy services at NewYork-Presbyterian Hospital
- Iman Ahmed, PharmD
  - Doctor of Pharmacy from Howard University College of Pharmacy
  - Current PGY2 Hematology/Oncology Resident at NewYork- Presbyterian Hospital
- Kevin Scott II, PharmD
  - Doctor of Pharmacy at Xavier University of Louisiana College of Pharmacy in New Orleans
  - Completed PGYI at Saint Michael's Medical Center in Newark, New Jersey
  - Pharmacy Operations Manager for Inpatient Adult Medicine and Emergency Services at NewYork-Presbyterian Hospital

# THE ENTIRE TEAM



- Synchronous fireflies (*Photinus carolinus*) are the only species in America that can synchronize their flashing light patterns
- To help female fireflies recognize potential mates
- When flashes were out of synch, females' response rate was 10%
- When in-sync females responded more than 80% of the time
- **Goal– 100% of students we serve match**

## THE 'WHY'

- Ensure Black Pharmacists are adequately represented within the healthcare system
- Ensure Black Pharmacists have leadership opportunities

# GOALS AND STRUCTURE OF THE PROGRAM

**Goals:** To increase the representation of Black Pharmacy Residents for the 2021/2022 resident cycle

- Phase 1
  - At least **75%** of pharmacy students match to an ASHP accredited PGYI Pharmacy residency
- Phase 2
  - Have **100%** of pharmacy students match to an ASHP accredited PGYI Pharmacy residency

## Structure

- Assist 1-3 students on an individual basis
  - CV review
  - LOI review
  - PPS
  - PhORCAS application
- Group/individual interviewing session
  - Practice interview questions will be available in the resource packet (distributed to every student and pharmacist leader)

# STRUCTURE OF THE PROGRAM

- Duration of program: 6 months (Oct- March)
  - Minimum of twice monthly meetings
- Complete prospective resident activities by posted deadlines
- Attend the program orientation meeting or watch the recorded session
- Regular interaction with preceptor/student in the form of scheduled conversations or meetings
- Complete evaluate survey at the end of the program

# REACHING RESIDENCY

## Future dates

- Prospective residents are matched to preceptors based on interest and type of residency completed by preceptor
- Matching will be completed by the first week of October
- Prospective residents to reach out to preceptors no later than **Monday, October 19<sup>th</sup>**

## Current numbers

- Total number of students – 104
- Total number of preceptors – > 60

# ASHP MIDYEAR 2020 – VIRTUAL

## Full Registration Fees

### Not a member?

Join ASHP Today and Save on Midyear.  
You can save more than the cost of your membership!

	ASHP Member	Non- Member
<b>Early Bird</b> (on or before November 6)	\$249	\$634
<b>Regular</b> (November 7 and after)	\$299	\$684
<b>Resident</b> (Pharmacy residents in ASHP- or Canadian-accredited programs)	<b>FREE</b>	\$274
<b>Pharmacy Technician</b>	<b>FREE</b>	\$244
<b>Student</b> (Full-time undergraduate or postgraduate pharmacy students)	<b>FREE</b>	\$219
<b>Retired</b>	\$145	\$363

## ASHP Residency Showcase Hours

### MONDAY, December 7

3:00 p.m.–6:00 p.m. ET

### TUESDAY, December 8

10:00 a.m.–1:00 p.m. ET

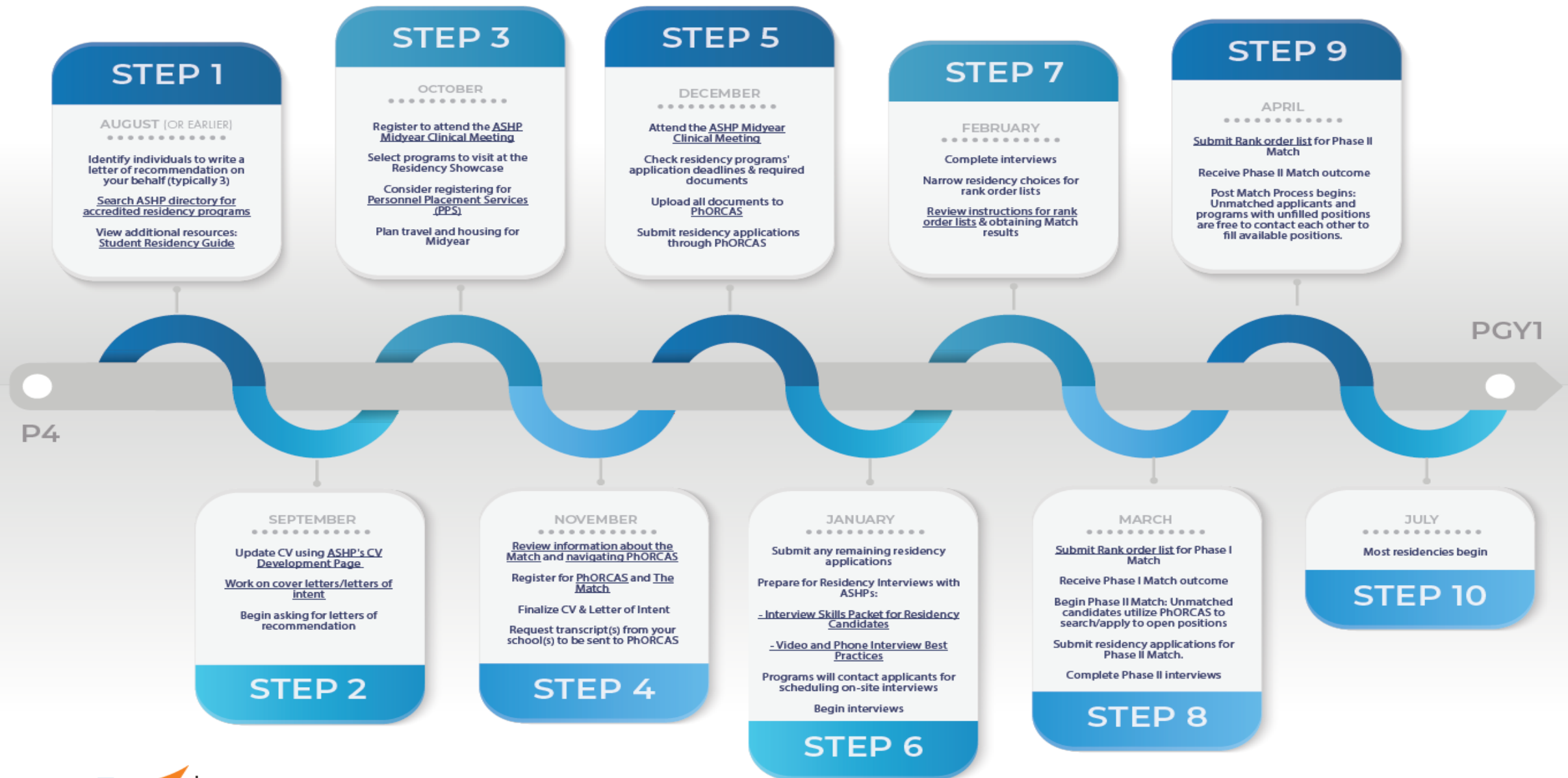
3:00 p.m.–6:00 p.m. ET

*Admission is FREE for all Midyear meeting registrants.*

**REGISTER FOR MIDYEAR**



# Roadmap to Residency: P4 Timeline



# REACHING RESIDENCY TIMELINE

## Key Dates

Oct 1	Personal placement services (PPS) opens
Oct 19	<ul style="list-style-type: none"><li>• Prospective residents reach out to preceptors for introduction</li><li>• Schedule dates for CV, LOI review, interview techniques</li><li>• Request transcript from schools of pharmacy</li><li>• Reach out individuals who will write LORs (x5)</li><li>• Business cards</li><li>• Schedule 1:1 interviews</li></ul>
Nov 1	<ul style="list-style-type: none"><li>• List of programs participating in the match made available</li></ul>
Nov 2	<ul style="list-style-type: none"><li>• Prospective resident will email list of programs of interest to preceptors</li></ul>
Nov 3-Dec 11 <sup>th</sup>	<ul style="list-style-type: none"><li>• Applicants can register for the Match via the shared PhORCAS/Match portal</li><li>• Registration portal can be accessed from the applicant registration page or directly at <a href="http://portal.phorcas.org">portal.phorcas.org</a></li></ul>
Dec 18 <sup>th</sup> – Dec 31 <sup>st</sup>	<ul style="list-style-type: none"><li>• All applicants should have registered for the match (recommended)</li></ul>

# REACHING RESIDENCY TIMELINE

## Key Dates

Jan 1 <sup>st</sup> - Feb 15 <sup>th</sup>	<ul style="list-style-type: none"><li>• Interviewing technique overview with preceptor</li><li>• Review rank order list for phase 1 of match</li><li>• Thank you letters</li><li>• Review clinical case and presentation (provided)</li></ul>
Feb 15 <sup>th</sup>	<ul style="list-style-type: none"><li>• Applicants and programs can submit rank order lists for Phase I of the match</li></ul>
Mar 5 <sup>th</sup>	<ul style="list-style-type: none"><li>• Phase 1 rank order deadline</li></ul>
Mar 19 <sup>th</sup>	<ul style="list-style-type: none"><li>• Phase 1 match day</li></ul>
Mar 23 <sup>rd</sup>	<ul style="list-style-type: none"><li>• Application cycle for phase 2</li></ul>
April 7 <sup>th</sup>	<ul style="list-style-type: none"><li>• Input rank order list for phase 2</li></ul>
April 14 <sup>th</sup>	<ul style="list-style-type: none"><li>• Phase 2 match day!</li></ul>

# FAQS

- *How long will the preceptors be available?*
  - We ask preceptors to make a commitment of 6 months in order to ensure pharmacy students are able to fully benefit from the relationship – (encourage a minimum twice a month)
- *What to do if relationship is not going as expected?*
  - Encourage reaching out to preceptor first
  - Contact relationship coordinator- Ijeoma Ekeocha, Iman Ahmed or Kevin Scott
- *How long will the preceptors be available?*
  - We ask preceptors to make a commitment of 6 months in order to ensure pharmacy students are able to fully benefit from the relationship – (encourage a minimum twice a month)
- *What to do if relationship is not going as expected?*
  - Encourage reaching out to preceptor first
  - Contact relationship coordinator- Ijeoma Ekeocha, Iman Ahmed or Kevin Scott
- *How will the program vet students?*
  - Students will not be vetted

## **Reaching Residency Relationship Coordinator information:**

Student's A-H: Iman

Student's I-P: Ijeoma

Student's: Q-Z Kevin

[Home](#)  
[Contact](#)[About Us](#)[Meet Ijeoma!](#)[Listen Here](#)[Ask A Pharmacist](#)[Subscribe](#)[COVID-19](#)

# Advice to Prospective Pharmacy Residents

## We Want To Hear From You!

Share your advice for prospective pharmacy residents to be featured on an upcoming episode!

Click below to record a short message to a prospective resident. **Please remember to state your name and type of residency completed.**

Send a voice message  
to Brown Skin Stories

Is your microphone ready?

 Start recording

1 Record - 2 Listen - 3 Send

[Brownskinstories.com/resident](https://Brownskinstories.com/resident)

**Deadline: Friday, October 30, 2020**



# REACHING RESIDENCY

INCREASING REPRESENTATION OF BLACK PHARMACY RESIDENTS



# **Orientation Slides for Prospective Residents**



# Reaching Residency

INCREASING REPRESENTATION OF BLACK PHARMACY RESIDENTS



# Agenda

- ▶ Introduction
- ▶ Goals of program
- ▶ Review general residency information
- ▶ Review important residency websites
- ▶ Review program timeline for prospective residents
- ▶ Discuss tips for CV prep, letter of intent (LOI), and interview techniques
- ▶ Expectations for prospective residents and preceptors

# The Team



- Ijeoma Ekeocha, PharmD
  - Doctor of Pharmacy from University of the Sciences, formally known as Philadelphia College of Pharmacy
  - Completed PGY1 Non-Traditional pharmacy residency at The Johns Hopkins Hospital
  - Clinical Pharmacy Manager of Specialty Pharmacy services at NewYork-Presbyterian Hospital



- Iman Ahmed, PharmD
  - Doctor of Pharmacy from Howard University College of Pharmacy
  - Current PGY2 Hematology/Oncology Resident at NewYork- Presbyterian Hospital



- Kevin Scott II, PharmD
  - Doctor of Pharmacy at Xavier University of Louisiana College of Pharmacy in New Orleans
  - Completed PGY1 at Saint Michael's Medical Center in Newark, New Jersey
  - Pharmacy Operations Manager for Inpatient Adult Medicine and Emergency Services at NewYork-Presbyterian Hospital

# The Entire Team



- Synchronous fireflies (*Photinus carolinus*) are the only species in America that can synchronize their flashing light patterns
- To help female fireflies recognize potential mates
- When flashes were out of synch, females' response rate was 10%
- When in-sync females responded more than 80% of the time
- **Goal– 100% of students we serve match**

# Typical Candidate Evaluation

- ▶ GPA
- ▶ Work experience
- ▶ Presentations
- ▶ Publications
- ▶ Honors/Awards
- ▶ Letters
- ▶ Goals
- ▶ Motivation
- ▶ Leadership skills
- ▶ Communication skills
- ▶ Extracurricular activities
  - ▶ Community service
- ▶ Personal qualities

# The 'Why'

- Ensure Black Pharmacists are adequately represented within the healthcare system
- Ensure Black Pharmacists have leadership opportunities

# Goals and structure of the program

**Goals:** To increase the representation of Black Pharmacy Residents for the 2021/2022 resident cycle

- Phase 1
  - At least **75%** of pharmacy students match to an ASHP accredited PGY1 Pharmacy residency
- Phase 2
  - Have **100%** of pharmacy students match to an ASHP accredited PGY1 Pharmacy residency

## Structure

- Assist 1-3 students on an individual basis
  - CV review
  - LOI review
  - PPS
  - PhORCAS application
- Group/individual interviewing session
  - Practice interview questions will be available in the resource packet (distributed to every student and pharmacist leader)

# Structure of the program

- Duration of program: 6 months (Oct- March)
  - Minimum of twice monthly meetings
- Complete prospective resident activities by posted deadlines
- Attend the program orientation meeting or watch the recorded session
- Regular interaction with preceptor/student in the form of scheduled conversations or meetings
- Complete evaluate survey at the end of the program

# Reaching residency

## Future dates

- Prospective residents are matched to preceptors based on interest and type of residency completed by preceptor
- Matching will be completed by the first week of October
- Prospective residents to reach out to preceptors no later than **Monday, October 19<sup>th</sup>**

## Current numbers

- Total number of students – > 100
- Total number of preceptors – > 70



# Residency Considerations

- ▶ Geographic considerations
- ▶ Areas of interest
- ▶ Size of program
- ▶ Preceptor make up
  - ▶ Clinical
  - ▶ Faculty
  - ▶ Mixed

# Residency considerations

## Program specific considerations

- ▶ Inpatient vs outpatient
- ▶ Staffing requirements
- ▶ On-call responsibilities
- ▶ Teaching opportunities
- ▶ Research opportunities
- ▶ Previous resident experience/reviews
- ▶ Additional opportunities for growth

# ASHP midyear 2020 – Virtual

## Full Registration Fees

### Not a member?

Join ASHP Today and Save on Midyear.

You can save more than the cost of your membership!

	ASHP Member	Non- Member
<b>Early Bird</b> (on or before November 6)	\$249	\$634
<b>Regular</b> (November 7 and after)	\$299	\$684
<b>Resident</b> (Pharmacy residents in ASHP- or Canadian-accredited programs)	<b>FREE</b>	\$274
<b>Pharmacy Technician</b>	<b>FREE</b>	\$244
<b>Student</b> (Full-time undergraduate or postgraduate pharmacy students)	<b>FREE</b>	\$219
<b>Retired</b>	\$145	\$363

## ASHP Residency Showcase Hours

### MONDAY, December 7

3:00 p.m.–6:00 p.m. ET

### TUESDAY, December 8

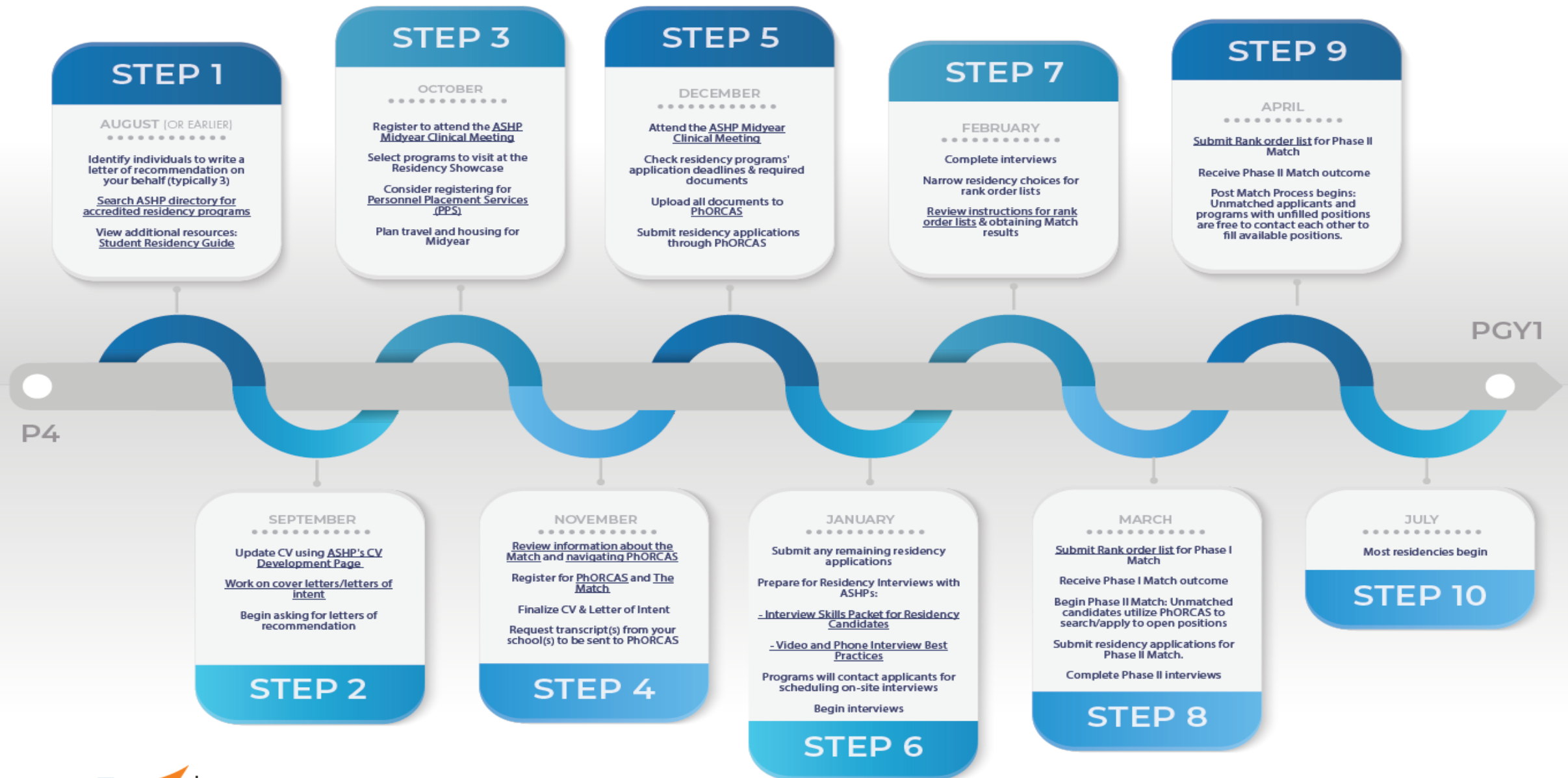
10:00 a.m.–1:00 p.m. ET

3:00 p.m.–6:00 p.m. ET

*Admission is FREE for all Midyear meeting registrants.*

**REGISTER FOR MIDYEAR**

# Roadmap to Residency: P4 Timeline



# Program Directories

- ▶ ASHP Online Residency Directory
  - ▶ [www.ashp.org](http://www.ashp.org)
- ▶ ACCP directory of residencies and fellowships
  - ▶ <https://www.accp.com/resandfel/index.aspx>
- ▶ APhA Directory of Pharmacy Practice Residencies (Community Practice)
  - ▶ [APhA Directory of Pharmacy Residencies](#)

# Reaching Residency Timeline

## Key Dates

Oct 1	Personal placement services (PPS) opens
Oct 19	<ul style="list-style-type: none"><li>• Prospective residents reach out to preceptors for introduction</li><li>• Schedule dates for CV, LOI review, interview techniques</li><li>• Request transcript from schools of pharmacy</li><li>• Reach out individuals who will write LORs (x5)</li><li>• Business cards</li><li>• Schedule 1:1 interviews</li></ul>
Nov 1	<ul style="list-style-type: none"><li>• List of programs participating in the match made available</li></ul>
Nov 2	<ul style="list-style-type: none"><li>• Prospective resident will email list of programs of interest to preceptors</li></ul>
Nov 3-Dec 11 <sup>th</sup>	<ul style="list-style-type: none"><li>• Applicants can register for the Match via the shared PhORCAS/Match portal</li><li>• Registration portal can be accessed from the applicant registration page or directly at <a href="http://portal.phorcas.org">portal.phorcas.org</a></li></ul>
Dec 18 <sup>th</sup> – Dec 31 <sup>st</sup>	<ul style="list-style-type: none"><li>• All applicants should have registered for the match (recommended)</li></ul>

# Reaching residency timeline

## Key Dates

Jan 1 <sup>st</sup> - Feb 15 <sup>th</sup>	<ul style="list-style-type: none"><li>• Interviewing technique overview with preceptor</li><li>• Review rank order list for phase 1 of match</li><li>• Thank you letters</li><li>• Review clinical case and presentation (provided)</li></ul>
Feb 15 <sup>th</sup>	<ul style="list-style-type: none"><li>• Applicants and programs can submit rank order lists for Phase I of the match</li></ul>
Mar 5 <sup>th</sup>	<ul style="list-style-type: none"><li>• Phase 1 rank order deadline</li></ul>
Mar 19 <sup>th</sup>	<ul style="list-style-type: none"><li>• Phase 1 match day</li></ul>
Mar 23 <sup>rd</sup>	<ul style="list-style-type: none"><li>• Application cycle for phase 2</li></ul>
April 7 <sup>th</sup>	<ul style="list-style-type: none"><li>• Input rank order list for phase 2</li></ul>
April 14 <sup>th</sup>	<ul style="list-style-type: none"><li>• Phase 2 match day!</li></ul>

# Letter of Intent

- ▶ Intended to highlight your strengths and interests for the position and explain to reviewers why you are well qualified
- ▶ Clear and concise
- ▶ Do not copy your CV
- ▶ Make sure all spelling is correct (RPDs, address, program name, abbreviations)
- ▶ Proofread extensively



# Contents of LOI

## Introduction Paragraph

- Express interest
- How you heard about the program
- Include all those you interacted with (any RPDs, preceptors, residents)
- State both short and long term goals emphasizing how this program will allow you to achieve your goals

## Body Paragraphs

- Describe your motivation for pursuing a residency
- Highlight 3-4 skills or achievements that you have and translate how this will allow you to become the best resident
- Explain your leadership positions, rotational experiences, and work positions in a way that correlates to residency

## Closing Paragraph

- Reemphasize your passion for becoming a resident
- Explain how your strengths and experiences align with the residency goals
- Highlight how this residency program will allow you to achieve your goals
- End with a thank you
- Sign your name

# Personal Program Directory

- ▶ Create your own residency program directory
- ▶ Include all factors that you would consider before matching into a residency program

Location

Rotations

Longitudinal  
Requirements

Salary

PGY2

Presentation  
Requirements

# Personal Program Directory

Program	Location	Core Rotations	Elective Rotations	Other Requirements/ longitudinal	Salary	Benefits	PGY2
Medstar Georgetown University Hospital (2)	DC	9-internal medicine, critical care, hematology/oncology, pediatrics, transplant, infectious diseases, ambulatory care, pharmacy administration, drug policy/drug information	3-ID, SICU, Ambulatory care, drug pol	<p>2 DURs, four longitudinal aspects: anticoagulation clinic, drug distribution, drug policy, and oncology service.</p> <p>one weeknight per week and one weekend per month</p> <p>Anticoagulation Clinic: one afternoon per week</p> <p>Present two journal club articles during the course of the residency</p> <p>ACLS training and certification</p> <p>Participation in WMHSP Pharmacy or University of Maryland Teaching Certificate Program</p>	45000	21 days annual leave, 7 holidays, health/dental/vision insurance, re	
Medstar Washington Hospital Center (4)	DC	9-Internal medicine, drug information, cardiology, oncology, medical intensive care, surgical intensive care, practice management, and advanced heart failure & heart transplant	2-Palliative care, neuroscience intensive care, burn/trauma, neonatal intensive care, and infectious disease	Have completed an additional 400 hours of independent pharmacy practice in distribution of medicines and prescriptions. This is work experience that is outside of school.	59400	Health/vision/dental insurance, 10 \	Yes
Sibley Memorial Hospital (2)	DC	internal medicine, critical care, oncology, drug information, central pharmacy practice, management, emergency medicine and geriatrics	Elective Rotations Oncology Geriatrics Infectious Disease	<p>Presenting a residency project at the Eastern States Conference for Pharmacy Residents and Preceptors</p> <p>Completing, presenting and writing up a medication use evaluation</p> <p>Completing, presenting and writing up a Pharmacy and Therapeutics Committee monograph</p> <p>Completing, writing and publishing a departmental newsletter</p> <p>Presenting at least one Journal Club article</p> <p>Completing and presenting a formal seminar</p>	47840	26 days paid time off, medical/dental/vision coverage, CE/travel exp	

# Curriculum Vitae

- ▶ Stylistic Tips
  - ▶ Professional stock paper with appropriate color
  - ▶ Avoid fancy fonts
  - ▶ Be consistent

# Curriculum Vitae – Organizational Tips

- ▶ Clearly state your name and how you can be reached
- ▶ Provide explanations for items
- ▶ Arrange items in reverse chronological order
- ▶ Describe APPE roles and responsibilities
- ▶ Highlight honors and awards
- ▶ Everything on CV is fair game

# Curriculum Vitae

- ▶ Include your professional work experience
- ▶ Examples of leadership and professional activities judiciously
- ▶ List presentations separately
  - ▶ IPPE
  - ▶ APPE
- ▶ Professional meeting presentations and posters

# Portfolio & Personal Statement

## Portfolio

- ▶ Binder with professional copy pertinent work completed
  - ▶ Drug monographs
  - ▶ Journal
  - ▶ Posters

## Personal statement

- ▶ Intended to show that you can explain yourself clearly
  - ▶ Focus on strengths
  - ▶ Keep it to one page
- 
- ▶ Ask at least two people to review your curriculum vitae or personal

# Interview Preparation/Tips

- ▶ Rule #1: Be punctual
  - ▶ Arrive at least 10-15 minutes before the start of your interview
- ▶ Rule #2: Be prepared
  - ▶ Research your desired program
  - ▶ Review your CV
  - ▶ Know your presentation
    - ▶ Email presentation in advance
      - ▶ Bring copies of handouts
      - ▶ Bring flash drive in case of an emergency



# Interview Preparation/Tips

- ▶ Rule#3: Dress the part
  - ▶ Dressing professionally is vital for success, allow clothing choices to reflect the culture of the work environment
    - ▶ Dressing for success:
      - ▶ Avoid loud colors
      - ▶ Pick something that complements you
      - ▶ Clothing should fit appropriately
      - ▶ Gentlemen: Always wear a full suit w/ a tie and shoes should be polished

# Interview Preparation/Tips

- ▶ Rule #4: Ask Targeted questions
  - ▶ Ask questions that are specific to program
  - ▶ Have targeted questions for directors, preceptors, and residents
  - ▶ Include thought provoking questions
- ▶ Rule #5: Be enthusiastic
  - ▶ Prepare for a long day
  - ▶ Be engaged throughout the interview process
  - ▶ Follow up with thank you cards/letters
    - ▶ Program Director
    - ▶ Consider Preceptors and Residents

# Interview Preparation/Tips

- ▶ Rule #6: Make a lasting impression
  - ▶ Be yourself
  - ▶ Do not misrepresent yourself
  - ▶ Listen with purpose
  - ▶ RELAX
  - ▶ Have a positive outlook

# FAQs

- Keep all meetings with preceptor
- Be prepared for all meetings
- *How long will the preceptors be available?*
  - We ask preceptors to make a commitment of 6 months in order to ensure pharmacy students are able to fully benefit from the relationship – (encourage a minimum twice a month)
- *What to do if relationship is not going as expected?*
  - Encourage reaching out to preceptor first
  - Contact relationship coordinator- Ijeoma Ekeocha, Iman Ahmed or Kevin Scott

## **Reaching Residency Relationship Coordinator information:**

Student's A-H: Iman

Student's I-P: Ijeoma

Student's: Q-Z Kevin

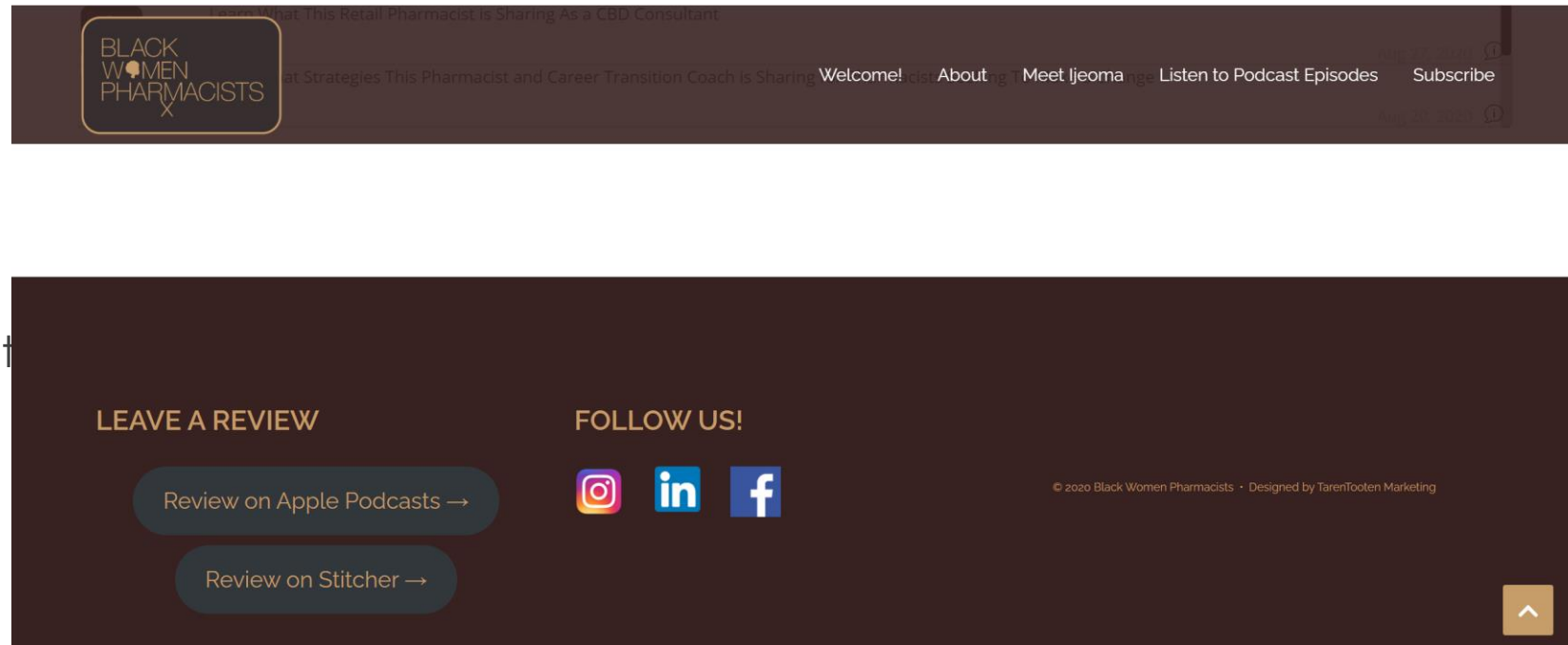
# Black Women Pharmacists – The Podcast

- ▶ Blackwomenpharmacists.com

- ▶ Instagram:  
@blackwomenpharmacists
- ▶ Facebook:  
@blackwomenpharmacists

- ▶ Listen to an episode of the podcast

- ▶ Apple podcasts
- ▶ iheartRadio
- ▶ Stitcher
- ▶ Google podcasts





# Reaching Residency

INCREASING REPRESENTATION OF BLACK PHARMACY RESIDENTS

## **Additional Resources**

## Selecting the right residency program

**P**harmacy is becoming a patient-oriented profession.<sup>1</sup> To prepare for a professionwide, patient-centered practice model, growth of residency programs will be necessary.<sup>1</sup> A residency is a postgraduate training program in a defined area of pharmacy practice that can improve skills, build confidence, and provide a competitive edge in the job market.<sup>2</sup> Deciding whether to complete a residency is a crucial decision for the pharmacy student or new graduate. Just as important is the choice of a specific program.

**Types of residency programs.** The first residency programs were offered in the 1930s.<sup>2</sup> Today, 700 residency programs in 49 states and Puerto Rico are accredited by the American Society of Health-System Pharmacists (ASHP).<sup>3,4</sup> The general pharmacy practice residency, the most common type of postgraduate training program, provides experience in a broad range of areas. Specialized residencies usually focus on one particular area of practice, such as critical care or oncology. Depending on one's initial career goals and experience, completing a general pharmacy practice residency may be required before moving on to a specialized residency or acquiring a midlevel position. Advanced residencies in pharmacy practice management and managed care pharmacy systems are also available. Residency training can take place in hospitals, community pharmacies, ambulatory care centers, long-term-care facilities, managed care facilities, the pharmaceutical

industry, academic institutions, and professional organizations.<sup>4</sup>

**Selecting a residency program.** A directory of general pharmacy practice and specialized residencies is available from ASHP.<sup>5</sup> Programs can be searched for by state, program type, or institution. Each listing gives accreditation status, contact information, special features, fringe benefits, application requirements, and other useful information. Research should include visiting the Web site of the training institution and contacting the residency program coordinator. Information on accredited and nonaccredited programs can also be obtained from the American Pharmacists Association,<sup>6</sup> the Academy of Managed Care Pharmacy,<sup>7</sup> and the American College of Clinical Pharmacy.<sup>8</sup>

In searching for the right residency program, one of the first questions to answer is whether to pursue an accredited or nonaccredited program. Accredited programs have to meet certain standards. In addition, accredited programs are subjected to continuous quality improvement and are reviewed by residency preceptors or program directors. Accredited programs must ensure that residents achieve specified competencies and must offer an appropriate training environment.<sup>3</sup>

The residency should dovetail with one's career goals. For someone who is interested in running a clinic in a community setting, a hospital pharmacy residency may not provide the most useful experience. Similarly, a future career in

pharmacy administration would not be appropriately served by an ambulatory care residency.

Another factor to consider is location. A residency program may have everything that a prospective candidate is looking for but be located far from family and friends. Although a residency is designed to help a practitioner grow professionally, emotional support may be a key to successful completion.

Some residency programs are more flexible than others. Can the program's goals be tailored to match the goals of the resident? How many of the rotations are elective? Are there opportunities to work additional hours to supplement the stipend? Does the training site offer a house-call program, activities in an academic setting, or other innovations that will enrich the training experience? Flexibility can allow the resident to explore his or her unique interests and enable the training site to maneuver around unexpected events.

**ASHP Residency Showcase and Personnel Placement Service.** The ASHP Midyear Clinical Meeting (MCM) hosts a Residency Showcase involving all ASHP-accredited and accreditation-pending general pharmacy practice residencies. Residency programs that are not ASHP accredited or that are recruiting their first residency class may also be featured. The Showcase, which usually lasts from Monday morning to Tuesday afternoon during the MCM week, allows prospective residents the chance to meet program representatives in person, explore programs from around the country, gather information on applicant requirements, pick up an application packet, and network with peers.

Residency programs featured in the Showcase offer residencies through the Resident Matching Program managed by the National Matching Service, which seeks to pair prospective residents with

*The New Practitioners Forum column features articles that address the special professional needs of pharmacists early in their careers as they transition from students to practitioners. Authors include new practitioners or others with expertise in a topic of interest to new practitioners. AJHP readers are invited to submit topics or articles for this column to the New Practitioners Forum, c/o Jill Haug, 7272 Wisconsin Avenue, Bethesda, MD 20814 (301-664-8821 or newpractitioners@ashp.org).*

*Continued on page 1140*



*Continued from page 1138*

training sites.<sup>9</sup> The matching process requires applicants to first apply directly to residency programs; both the training site and the applicant must list each other on their respective matching lists for a possible match to occur.

The MCM offers a career assistance program, CareerPharm's Personnel Placement Service (PPS), which features some generalized residencies, specialized residencies, other training programs (such as fellowships), and employment opportunities.<sup>2</sup> The PPS is unique in that, unlike the Residency Showcase, there are opportunities for face-to-face interviews between candidates and employers. Further information about the upcoming MCM, Residency Showcase, and PPS is available through ASHP's Web site.<sup>10</sup>

**Interviewing for a residency.** The MCM may present opportunities for an initial interview, or preliminary interviews may happen over the telephone. The interviewer will gather a variety of information about the prospective resident, including qualifications, leadership roles, service activities, professional affiliations, and personal characteristics. The first interview is usually brief (30 minutes or less) and to the point, so it is imperative for the candidate to make a good first impression and show genuine interest in the program. The second interview, if it occurs, may take place at the institution sponsoring the residency. This onsite interview may last all day and require an overnight stay in the area. The second interview should be viewed as an opportunity for both prospective resident and preceptors to interrogate each other. It also lets one meet the staff and see the training site's facilities, equipment, and technology.

The interviews should convey an accurate impression of the total residency program and the expectations the resident and the preceptors have for each

other. The potential resident should also come away informed about down-to-earth matters like the cost of living in the area, traffic, affordable places to live, and recreational opportunities. If further information is needed, the residency coordinator should be contacted.

To prepare for the interviews, past accomplishments and future goals should be written down for easy reference. Practicing answers in front of a mirror or with a tape recorder can allow imperfections to be corrected. Asking peers to act as the employer in a mock interview may help bring attention to certain attitudes, behaviors, and statements that need improvement. These preparation techniques can also help ease nervousness.

There may be a chance to discuss the residency program with current residents to gain insights and frank opinions that may not otherwise be obtainable. Details that may be useful to investigate include resident's daily responsibilities, the workload, preceptors' availability, staff complaints, and other potential friction points.

Candidates will be doing themselves a favor by being honest during interviews and expecting the same from those with whom they speak.

**Going for a second-year residency or fellowship.** Graduates of general pharmacy practice residencies may wish to pursue additional training. CareerPharm provides descriptions of 17 specialized residencies.<sup>11</sup> Attending the MCM enables one to explore specialized residencies and fellowships; the institution or training site may pay for a resident to go to the MCM.<sup>3</sup> Additional training may be available at the resident's current site. Although additional training may mean sacrificing a good salary for another year or two, the end result may open doors that could otherwise remain closed.

**Conclusion.** Choosing a residency program that matches one's objectives and characteristics will benefit one's pro-

fessional career and advance the pharmacy profession.

1. American College of Clinical Pharmacy Clinical Practice Affairs Subcommittee. A vision of pharmacy's future roles, responsibilities, and manpower needs in the United States. *Pharmacotherapy*. 2000; 20:991-1020.
2. Survival strategies for your new career. Bethesda, MD: American Society of Health-System Pharmacists; 2002.
3. Teeters JL. Pharmacy residency programs: how to find the one for you. *Am J Health-Syst Pharm*. 2004; 61:2254-9.
4. American Society of Health-System Pharmacists. CareerPharm. Pharmacy residencies. [www.careerpharm.com/seeker/resources/faqs.cfm](http://www.careerpharm.com/seeker/resources/faqs.cfm) (accessed 2005 Feb 22).
5. American Society of Health-System Pharmacists. ASHP residency directory. [www.ashp.org/directories/residency/](http://www.ashp.org/directories/residency/) (accessed 2005 Jan 19).
6. American Pharmacists Association. [www.aphanet.org/AM/Template.cfm?Section=Advanced\\_Training\\_Credentialing1&Template=/CM/HTMLDisplay.cfm&ContentID=2878](http://www.aphanet.org/AM/Template.cfm?Section=Advanced_Training_Credentialing1&Template=/CM/HTMLDisplay.cfm&ContentID=2878) (accessed 2005 Jan 19).
7. Academy of Managed Care Pharmacy. Residency submissions. [www.amcp.org/amcp.ark?c=residency&sc=view\\_all](http://www.amcp.org/amcp.ark?c=residency&sc=view_all) (accessed 2005 Jan 19).
8. American College of Clinical Pharmacy. Directory of residencies and fellowships. [www.accp.com/resandfel/](http://www.accp.com/resandfel/) (accessed 2005 Jan 19).
9. National Matching Service. ASHP Resident Matching Program. [www.natmatch.com/ashprmp/index.htm](http://www.natmatch.com/ashprmp/index.htm) (accessed 2005 Jan 19).
10. American Society of Health-System Pharmacists. 39th ASHP Midyear Clinical Meeting and Exhibits. [www.ashp.org/meetings/midyear/](http://www.ashp.org/meetings/midyear/) (accessed 2005 Jan 19).
11. American Society of Health-System Pharmacists. CareerPharm. The next step: specialized residencies. [www.careerpharm.com/seeker/resources/Res3.cfm](http://www.careerpharm.com/seeker/resources/Res3.cfm) (accessed 2005 Jan 19).

**Tanya Nelson, Pharm.D.,** Drug Development Fellow in Drug Information  
Division of Drug Information  
Food and Drug Administration  
5600 Fishers Lane, HFD-20  
Rockville, MD 20857  
[tannels@iupui.edu](mailto:tannels@iupui.edu)

# Strategies for successfully navigating the pharmacy residency interview process

SARAH L. ANDERSON, PHARM.D., BCPS<sup>1,2</sup>

Am J Health-Syst Pharm. 2015; 72:(suppl 1):S33-5

This article has been reprinted with permission from the authors and the *Journal of Health-System Pharmacy Residents (JHPR)*. Appearance of this article in *AJHP Residents Edition* ensures its continued availability and allows its indexing by PubMed.

*The residency interview process is an exciting, stressful, whirlwind experience. Suggestions for optimizing this experience include: maintaining a professional presence, arriving on-time, being collegial with your co-applicants, judicious use of your cell phone, preparation of questions to ask and responses to questions asked of you, and sending thank-you notes. While these suggestions may sound intuitive, in the heat of the moment it is possible to make a crucial interview faux pas. Thinking through these issues ahead of time and proactively planning for your interview experience will help you to be calm, confident, and poised for success during your interview.*

**A**s a residency candidate, it is important to congratulate yourself for successfully navigating the

residency program application process and securing an interview. An invitation for an on-site interview means that your application garnered positive attention and you are being considered more seriously for a residency position at that institution. The on-site interview is a crucial step in the residency selection process and should be approached with preparation and professionalism. Being aware of common pitfalls and how to avoid them as well as other facets of the interview day and how to prepare for them will help you to better navigate the interview process.

## Maintain a professional social media presence

Whether you use LinkedIn, Google+, Facebook, Twitter, or another social networking site, be prepared for the RPD or other preceptors to search for you and/or access your profile(s). A 2009 survey of RPDs' attitudes toward using social media as a resident recruiting tool demonstrated mixed opinions on whether the RPDs would use social

media to inform residency selection decisions. However, approximately 50% of respondents had a Facebook profile and 25% had a LinkedIn account, making it possible for these RPDs to search for candidate profiles in those venues.<sup>1</sup> Because of the growth and spread of social networking since this survey was conducted three years ago, a similar survey conducted today may reveal that RPDs are not only more familiar with social networking sites but may use them more frequently as a recruiting or screening tool. It is highly likely that a prospective RPD or other residency program preceptor could view your profile pre- or post-interview and as such, it is imperative that your profile uphold a professional image of you. There should not be anything visible in your profile that could make a program question your professionalism or ethics as a prospective resident. Compromising photos, inflammatory postings, unethical comments are all material that may make an RPD think twice about your ability

1) Assistant Professor, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences; Aurora, CO 2) Clinical Pharmacy Specialist, Denver Health Medical Center; Denver, CO

Corresponding author: Sarah L. Anderson, PharmD, BCPS, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Mail Stop C238, 12850 E. Montview Blvd., room V20-2129, Aurora, CO 80045, 303-724-5926 (ph), 303-724-2627 (fax), email: sarah.anderson@ucdenver.edu (alternate email: sarah.anderson@dhha.org)

This article is a reprint. The original was published in the *Journal of Health-System Pharmacy Residents (JHPR)* in March 31, 2013, Volume 1, Issue 4.

Copyright © 2015, American Society of Health-System Pharmacists, Inc. All rights reserved. 1079-2082/15/0601-0S33.  
DOI 10.2146/sp150010

to uphold the standards expected of their residency program.

### **Arrive to your interview on time (or early)**

Whether you are responsible for transporting yourself to your interview or someone is picking you up at your hotel and driving you, it is imperative that you have a clear understanding of the expected start time. Residency interviews are typically held in January and February and, depending on the part of the country in which you are interviewing, can entail inclement weather. If this is the case, give yourself extra travel and/or drive time. Also be prepared for the unexpected, such as missing a wake-up call or a power outage that compromises your alarm clock, and have a back-up plan. Arriving late creates unnecessary stress for you as well as the RPD and other program staff and is not a positive way to start an interview. The interview in and of itself is a high-stress activity and arriving late only compounds the stress in an unproductive manner.

### **Always be on your best behavior**

Most residency interviews include a variety of elements, such as a meeting with the RPD, interviews with preceptors and current residents, a tour of the facility, a presentation given by you, and a meal. Be mindful that your entire on-site experience is part of the interview. Even during the more informal interactions, such as a hospital tour or lunch, it is expected that you remain professional and courteous to everyone with whom you interact.

The best cell phone etiquette is to keep it turned off during your interview. Unless there is an extenuating circumstance that requires you to be available for an urgent phone call, there should be no reason to have your cell phone turned on or in your hand during your interview. This includes while you are on a tour,

having a meal, or in someone's car while they are transporting you to or from the interview. Checking your cell phone throughout the day, even for innocent reasons such as looking at the time, tells the people around you that the interview is not your primary concern.

Depending on the program, you may be the only applicant interviewing on a given day or you may be on-site with multiple applicants. If you have the opportunity to interact with other candidates, it is again important to be professional and courteous. Lauding your accomplishments or trying to put down other applicants is unprofessional and unnecessary. Even though residency positions are becoming increasingly sought-after and you may feel that you need to assert yourself to have a competitive edge, do so in a way that puts your best self on display. Pharmacy is a small world and you may end up interacting with your co-applicant(s) in other realms of practice or perhaps even match to the same residency program!

### **Do your homework on the program, but also ask questions**

You want to go into your interview having thoroughly researched the program, but you should come prepared with questions as well. It is impossible to learn everything about the program from the website or promotional materials. Try to avoid asking questions that are easily obtained from these resources, such as, "Is your institution a teaching hospital?" but do ask questions that will give you better insight into the program, such as, "What medical staff education opportunities exist in your program?" When an applicant has zero questions about the residency program it may appear that either a) the applicant has an overly-confident knowledge of the program or b) the applicant has not given enough thought about the program to generate questions.

### **Anticipate commonly-asked questions**

Just as an RPD is expecting questions of you, you should be prepared to answer commonly-asked questions. These may include:

"Why do you want to do a residency at our institution?"

"How will our program assist you in accomplishing your career goals?"

These should be questions that you have considered during the decision-making process that led you to apply to the residency program and it is expected that you be able to articulate a thoughtful answer during your interview. A survey of ASHP-accredited residency programs in 2003 reported on commonly-asked interview questions and their ranked importance.<sup>2</sup> While not a complete list, this manuscript highlights some of the tried and true interview questions that you are likely to be asked and would be worth reviewing prior to your interview.

### **Send Thank-You Notes**

Post-interview thank-you notes are a courtesy that should be extended to all programs with which you interviewed, even if you have determined that the program is not a good fit for you. The content of the note does not have to be extensive, but should be specific to the program or the person with whom you interviewed. Some residency applicants choose to send thank-you notes to everyone with whom they interviewed and others send one thank-you note to the RPD. Another consideration is whether you send hand-written notes delivered via US mail or electronic notes sent via email. What you choose to do will depend on your personal style and preference. The important piece is that you acknowledge and thank the program for taking the time to interview you.

**Enjoy your time on-site**

Even though the on-site interview is a busy, high-stakes interaction, don't forget to enjoy your interview day. Your interview is an opportunity to meet leaders in pharmacy, tour world-class facilities, and learn more about what residency training has to offer; keep this in mind to energize and inspire you to have a positive on-site experience!

**References**

1. Cain J, Scott DR, Smith K. Use of social media by residency program directors for resident selection. *Am J Health-Syst Pharm.* 2010; 67:1635-9.
2. Mancuso CE, Paloucek FP. Understanding and preparing for pharmacy practice residency interviews. *Am J Health-Syst Pharm.* 2004; 61:1686-9.

# Resume/Curriculum Vitae (CV) Review Guidance

ASHP would like to thank you for your time and effort in serving as a Resume/CV mentor for our developing practitioners. The goal of this review is to provide those seeking Resume/CV feedback with professional, specific, and complete feedback in areas ranging from formatting, content, sections, and appearance. Here at ASHP we are not looking to create a 'standard' or 'guidance' for Resumes/CVs to conform to; we believe Resumes/CVs should have personality that is reflective of their author. Our goal is to create a venue for review.

We are asking that you provide honest and constructive feedback to your mentee as it is your opinion they are seeking. Below you will find suggestions on which Resumes/CVs are built but please feel free to address issues you find beyond what you see here. Additionally, we want your feedback to be complete; if you have negative feedback, please also provide solutions for improvement. The ability to utilize Microsoft Word's track changes and comments capability is an additional medium you may use to communicate your suggestions outside of the supplied rubric. With this medium, reinforce that the mentee should save their Resumes/CVs as PDF files before sending to prospective sites as track changes comments can reappear in differing versions of Word.

<i>Formatting</i>	<i>Content</i>	<i>Resume/CV Sections</i>	<i>Appearance</i>
<ul style="list-style-type: none"><li>• Appropriate white space (one inch margins, etc.)</li><li>• Standard font used (black, Times New Roman, Arial, etc.)</li><li>• Font size is appropriate (10-14)</li><li>• Utilizes bullets to break up paragraphs</li><li>• Dated information is in reverse chronological order (newest to oldest)</li><li>• NO spelling/grammatical errors</li><li>• No abbreviations</li><li>• Design elements, font, and layout are consistent</li><li>• Document is saved in a professional/appropriate named file (i.e. Doe_Jane Resume CV 2020.doc)</li><li>• Personal pronouns (I, me, my) are avoided</li></ul>	<ul style="list-style-type: none"><li>• Preceptors/supervisors names are included</li><li>• Information is easy to locate</li><li>• Information is descriptive but does not overload the reader</li><li>• Information unrelated to job target (i.e. marital status, age, nationality, etc.) is omitted</li><li>• Applicant name stands out and is at the top of the 1st page</li><li>• Pre-pharmacy information is NOT included except: relevant work experience, prior degrees, and unique accomplishments</li><li>• Email address is professional</li><li>• Utilizes action verbs versus adverbs (words ending in -ing)</li><li>• Utilizes technical vocabulary</li></ul>	<ul style="list-style-type: none"><li>• Headings stand out, are easy to find, and are prioritized</li><li>• Headers are consistent in formatting</li><li>• Page breaks are appropriately utilized</li><li>• References are provided or are "available upon request"</li><li>• Resume/CV sections are placed in best order to highlight applicants credentials</li><li>• Descriptive information is limited to unique/important content.</li><li>• Appropriate Sections are included based on current professional status (see: <a href="#">Traditional CV Components</a> and <a href="#">CV Transformations Through Career Transitions</a> on <a href="http://www.ashp.org/CVReview">www.ashp.org/CVReview</a>)<ul style="list-style-type: none"><li>○ For students: All APPE rotations are listed including ones not completed</li><li>○ For new practitioners: Resume/CV sections and/or content is omitted as needed (see: <a href="#">Resume/CV Transition Toolkit</a>)</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Resume/CV is visually pleasing and is both easy to follow and inviting to</li><li>• Page 1 has 'eye-catching' attributes</li><li>• Resume/CV appears original and not based on a template (i.e. Microsoft/internet template)</li><li>• Design elements (i.e. bullets, bolding, headings, etc.) are utilized to guide reader's eye through document and are not distracting</li><li>• Avoids more than 7 lines of continuous text</li><li>• Avoids sentence format</li><li>• Length/appearance is appropriate for current professional status, i.e. student, resident, new practitioner Resume/CV</li></ul>

**ASHP has the expectation that all communications will be kept professional and constructive. Feedback should be given in accordance to the scheduled deadlines and be complete in nature.**

# Resume/Curriculum Vitae (CV) Review Rubric

The Resume/CV Review Rubric is intended as a guide to help you organize your review process; your use of the rubric is not required. Additional review methods include using track changes and comments in MS Word or providing handwritten notes (among others).

Note: Resumes and CVs come in a variety of structures and formats; therefore, this rubric is not a guide for Resume/CV design.

STRUCTURE/CONTENT	EVALUATION	FEEDBACK/RECOMMENDATIONS
<b>HEADING:</b> <ul style="list-style-type: none"> <li>Full legal name</li> <li>Permanent contact information (Home / Business)</li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>Optional: OBJECTIVE/PERSONAL STATEMENT:</b> <ul style="list-style-type: none"> <li>Concise, focused statement of specific professional interests and/or career goals</li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>EDUCATIONAL EXPERIENCE:</b> <ul style="list-style-type: none"> <li>Degree(s) earned               <ul style="list-style-type: none"> <li>Institution, location, dates</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>PROFESSIONAL TRAINING:</b> <ul style="list-style-type: none"> <li>Residencies, Fellowship, Internships               <ul style="list-style-type: none"> <li>Credential(s) earned, institution, location, preceptors, dates</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>PROFESSIONAL EXPERIENCE:</b> <ul style="list-style-type: none"> <li>Pharmacy &amp; related experiences               <ul style="list-style-type: none"> <li>Position title, employer, location, dates</li> </ul> </li> <li>Experiential rotations               <ul style="list-style-type: none"> <li>Type of rotation, location, preceptor, dates</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>RESEARCH EXPERIENCE:</b> <ul style="list-style-type: none"> <li>Project(s)               <ul style="list-style-type: none"> <li>Institution, co-investigators, dates                   <ul style="list-style-type: none"> <li>Grants, outcome of submission</li> </ul> </li> </ul> </li> </ul> <p><i>*Students may include just title, institution, co-investigators, date</i></p>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>TEACHING EXPERIENCE:</b> <ul style="list-style-type: none"> <li>Faculty appointment               <ul style="list-style-type: none"> <li>Type of teaching, institution, course number &amp; title, date, number of students involved</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	



STRUCTURE/CONTENT (cont.)	EVALUATION	FEEDBACK/RECOMMENDATIONS
<b>POSTERS/PUBLICATIONS/PRESENTATIONS:</b> <ul style="list-style-type: none"> <li>Title(s) <ul style="list-style-type: none"> <li>Inviting organization, location, dates</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>PROFESSIONAL MEMBERSHIPS:</b> <ul style="list-style-type: none"> <li>Organization(s), years of membership</li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>LEADERSHIP EXPERIENCE:</b> <ul style="list-style-type: none"> <li>Position title, committees, projects <ul style="list-style-type: none"> <li>Organization(s), dates</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>SERVICE:</b> <ul style="list-style-type: none"> <li>Organization, community, volunteer <ul style="list-style-type: none"> <li>Dates, description</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>LICENSURE &amp; CERTIFICATION:</b> <ul style="list-style-type: none"> <li>Pharmacy, other licenses, additional training (i.e. ACLS, immunization, etc.) <ul style="list-style-type: none"> <li>Date of training or expiration date</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
<b>HONORS &amp; AWARDS:</b> <ul style="list-style-type: none"> <li>Academic recognitions, awards, scholarships <ul style="list-style-type: none"> <li>Name of award, sponsoring organization, date</li> </ul> </li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
READABILITY/FORMAT	EVALUATION	FEEDBACK/RECOMMENDATIONS
<ul style="list-style-type: none"> <li>Standard 10-14 font (i.e. Times New Roman, Arial, Tahoma, etc.)</li> <li>Design layout and elements are consistent</li> <li>Pages numbered</li> <li>Clear and distinguishable category headings</li> <li>Reverse chronological order</li> <li>Preceptor and advisor's title included</li> <li>Personal pronouns avoided (i.e. I, my, me, etc.)</li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	
ACCURACY/RELEVANCE	EVALUATION	FEEDBACK/RECOMMENDATIONS
<ul style="list-style-type: none"> <li>No spelling and grammatical errors</li> <li>Action verbs are used for descriptions</li> <li>Content focused on professional information</li> <li>Irrelevant personal information avoided (i.e. age, ethnicity, etc.)</li> <li>Relevant experiences highlighted</li> </ul>	<input checked="" type="radio"/> N/A <input type="radio"/> Reviewed	

MISCELLANEOUS	EVALUATION	FEEDBACK/RECOMMENDATIONS
<ul style="list-style-type: none"> <li>• Appropriate file name (i.e. JSmith_resume.docx)</li> <li>• No redundancy</li> <li>• E-mail address is professional</li> <li>• Information prior to pharmacy school avoided unless it involved a previous degree, a unique experience, relevant work or leadership</li> <li>• APPE rotations may be eliminated from CV typically once a residency is completed</li> <li>• Residency rotations may be included when applying for a PGY2 or first job</li> </ul>	<input checked="" type="radio"/> <b>N/A</b> <input type="radio"/> <b>Reviewed</b>	
OTHER ADDITIONAL FEEDBACK		

References:

American Society of Health-System Pharmacists. *Effective CV and Resume' Writing*. Bethesda, MD. 2011.

Bonnarens J. *Your CV and You*. Bethesda, MD. American Society of Health-System Pharmacists; 2010. <http://www.ashp.org/DocLibrary/MemberCenter/StudentForum/Webinar-CV-tips-handout-09-09-2010.aspx>

Buring S., Winkle J. *Developing a Curriculum Vitae for the New Practitioner*. Bethesda, MD, American Society of Health-System Pharmacists; 2009. [http://www.ashpmedia.org/video/webinar/CV\\_Dev\\_Int\\_Tips\\_NP.wmv](http://www.ashpmedia.org/video/webinar/CV_Dev_Int_Tips_NP.wmv)

Gallagher J., Wodlinger A. How to write a curriculum vitae. *Am J Health-Syst Pharm*. Mar 15, 2010; 67:446-447.

Reinders T. *The Pharmacy Professional's Guide to Resumes, CVs & Interviewing*. Washington, DC. American Pharmacists Association; 2011.



---

## **Résumés, CV's and Portfolios \***

### **I. Resume**

- **Purpose**
  - A brief (one or two page) document that highlights your attributes, achievements, and experience. The resume is common in the corporate world and most often used when seeking an interview for employment.
- **Content Areas**
  - Demographics (name, present and permanent address, telephone number, fax-if available, email address-if available)
  - Career objective (optional)
  - Education background (GPA is optional)
  - Experience (Pharmacy, other employment)
  - Skills or other special attributes (e.g., certificates, computer skills)
  - Activities (e.g., professional affiliations, service, educational)
  - Other (e.g., publications, awards, licenses)
  - Notation that references are available upon request
  - Do not include a photograph or other personal information (e.g., age, social security number, marital status, health status)
- **Format**
  - Chronological
    - Entries under the specific headings (e.g., education, work experience, skills) are listed in reverse chronological order (i.e., most recent first) by date
    - Offers a quick analysis of your progress and accomplishments
  - Functional
    - Entries usually deviate from traditional headings and cite specific abilities (e.g., communication skills, planning skills). Statements generally include where the experience was gained and the nature of the experience.
    - Offers a synopsis of the definite skills and abilities you possess
    - Usually not preferred by employers
  - Combination of Chronological and Functional
    - Blends the positive aspects of each
    - Allows for individual creativity
- **Writing Style**
  - Brevity is essential
  - Descriptions of activities should include action verbs (e.g., administered, assisted, computed, conducted, coordinated, completed, designed, developed, established, evaluated, interpreted, managed, monitored, observed, organized, participated, performed, planned, prepared, scheduled, supported, updated, volunteered)
  - Career objective, if included, should be no more than one or two sentences describing the type of position you are seeking

- Length
  - One or two pages
- Appearance
  - Concise
  - Absence of errors (e.g., spelling, grammatical, typographical)
  - Neutral color paper (e.g., white, off-white, ivory)
  - Quality paper (e.g., bond weight of 20 or 24 pounds, usually sold as “resume” paper)
  - Quality print (e.g., use a laser jet printer)
  - Items of special importance (e.g., name, headings, possibly special achievements) can be listed in bold text, underlined or in all capital letters; use discretion
  - Easy to read (e.g., symmetrical layout: consistent use of bullets, underlining, spacing, margins, upper and lower case letters; standard typeface)
  - Do not fold
  - Do not staple
- Accommodations for Electronic Transmission and Scanning
  - Use a quality printer (e.g., laser jet)
  - Use an original copy
  - Use standard sans serif typeface (e.g., Arial, Georgia, Tahoma)
  - Do not use less than a 10 point font size
  - Use 8 ½ x 11 inch paper
  - Use white or off-white paper

## II. Curriculum Vitae

- Curriculum Vitae vs. Resume
  - A curriculum vitae is a comprehensive document, usually two or more pages, summarizing professional qualifications, accomplishments and activities. A resume is a brief summary of qualifications, limited to one or two pages, generally used to market one’s self for a specific position. Some sources consider resume and curriculum vitae will be the same.
- Purpose
  - A current document that lists all professional qualifications and activities. The curriculum vitae is a summary of one’s personal history and professional qualifications. The term curriculum vitae is considered singular form. If the prefix “curriculum” is omitted, vita serves as the singular form and vitae as plural.
- Content Areas
  - Demographics (name, present and permanent address, telephone number, fax-if available, email address-if available); Date of birth, citizenship, marital status, social security number should be considered optional and is usually omitted
  - Career objective (optional)
  - Education background (Undergraduate or Pre-pharmacy; Graduate – if applicable; Professional; GPA is optional)
  - Experience (Professional – Practice, Research)
  - Experience (Other Work)
  - Certificates / Licenses

- **Content Areas (Continued)**
  - Awards
  - Honors
  - Professional Memberships and Activities (e.g., Leadership positions)
  - Community Service
  - Publications
  - Presentations
  - Skills or other special attributes (e.g., certificates, computer skills)
  - Activities (e.g., professional affiliations, service, educational activities)
  - Other (e.g., publications, awards, licenses)
  - Notation that references are available upon request
- **Format**
  - Comprehensive, yet concise
  - Organized and easy to read
  - Absence of errors (e.g., spelling, grammatical, typographical)
  - Neutral color paper (e.g., white, off-white, ivory)
  - Quality paper (e.g., bond weight of 20 or 24 pounds, usually sold as “resume” paper)
  - Quality print (e.g., laser jet printer)
  - Items of special importance (e.g., name, headings or possibly special achievements) can be listed in bold text, underlined or in all capital letters; use discretion
  - Easy to read (e.g., symmetrical layout: consistent use of bullets, underlining, spacing, margins, upper and lower case letters; standard typeface)
  - Do not fold

### **III. Portfolio**

- **Purpose**

Portfolios have been used for many years by artists and teachers as a means of organizing and documenting their professional growth and development. Pharmacy professionals can adapt the same techniques to document their knowledge and skills as they progress in their career. Just as you will identify information to add to your resume and curriculum vitae on a routine basis, make a habit of compiling representative samples of your work to serve as a framework for a portfolio. Developing a portfolio allows you to enhance the depth and breadth of information beyond what can be gained by reviewing your resume, curriculum vitae or through an interview.

- **Portfolio Design**

The design of your portfolio will depend on the intended audience. It is important to include the best examples of your work which highlight the knowledge and skills that are relevant to the position you are seeking. A portfolio is not necessarily a warehouse of personal data but rather the selection of specific information that provides evidence of your knowledge, skills and values. An outline or index of the information for your portfolio will provide the foundation for neatness and conciseness which are important in communicating your professional image. Due to the amount of information contained in a typical portfolio, you will likely need to consider an electronic medium (e.g., CD-ROM, Internet-based) with convenient navigation. However, a paper-based document can also be used.

- Potential Content Areas

### **Personal Information**

- Name, designation and title
- Contact information
- Mentors
- Curriculum vitae or resume
- Personal Statement
- Photograph
- Personal interests

### **Education**

- College or university attended
- Degree/s awarded
- Major/s
- Graduate thesis and major professor
- Academic record (transcript/s)

### **Licensure/Certification**

- Pharmacy licensure information
- Specialty practice certification
- Certificates of completion

### **Experiential Learning Experience**

- Internship
- Advanced practice experiences
- Residency
- Fellowship
- Fulfillment of standards created by national organizations

### **Recognition**

- Scholarships
- Academic honors
- Awards
- Certificates recognizing achievement
- Letters recognizing achievement

### **Professional Development**

- Positions held and descriptions of duties
- Performance evaluations
- Service
  - Patient care
  - Community
  - School, University, Profession
- Teaching
  - Sample of lecture outlines / slide presentations
  - Faculty evaluations
  - Peer reviewer comments
  - Videotape of lecture/s or segment/s
  - Self-evaluation and description of improvement
  - Instructional strategies
- Research / Scholarship
  - Areas of interest / expertise
  - Projects
- Publications
  - Abstracts
  - Articles

## **Professional Development (Continued)**

- Presentations
  - Letters of invitation
  - Presentation evaluations
  - Sample handouts, slides, videos
  - Posters
- Professional Memberships
- Professional Activities
- Professional Interests

## **Skills**

- Research
  - Analytical
  - Computer
  - Writing
  - Safety
  - Ethics
- Leadership
  - Elected positions
  - Appointed positions
  - Committee participation
  - Agendas
  - Documentation of outcomes
  - Team involvement
- Communication
  - Oral presentations
  - Written works
  - Interpersonal
- Computer
  - Software proficiency
  - Application of technology in teaching, research, service
- Professional practice
  - Patient case discussions
  - Evidence of problem solving
- Management
  - Budget preparation
  - Human resource management

## **References**

- Select faculty members, mentors, employers, pharmacists or other health professionals whom you know well and can expect them to reasonably comment about your knowledge, skills and abilities in a timely fashion
- Request permission to use references, in advance
- Three to six references are adequate. Each reference should include full name, title, work address, telephone number, fax number-if available and email address-if available
- Usually a list of references is prepared as a separate document

# **Guide for Preparing for an Interview \***

## **I. Before the Interview**

- Obtaining background information
- Completing an application form

## **II. Receiving an Invitation to Interview**

- Request an Invitation to Interview
- Review your resume or curriculum vitae
- Seek permission to use references
- Consider a mock interview
- Prepare and rehearse seminar (if requested)

## **III. Types of Interviews**

- By Purpose
  - Screening
  - Selection
- By Format
  - One on one
  - Search Committee
  - Group
- By Style
  - Direct question and answer
  - Discussion with open ended questions
  - Stress

## **IV. Interviewing**

- Reasonable Expectations from an Interviewer
- Commitment of the Interviewer
- Dress for Success
- Avoid Common Pitfalls
  - Unable to articulate a career objective
  - Lack of homework concerning the position or organization
  - Lack of perceived enthusiasm or interest
  - Nervousness
  - Did not arrive on time
  - Unable to maintain eye contact
  - Talked too fast
  - Didn't smile
  - Casual or inappropriate dress
  - Poor communication skills
  - Negative comments about previous employers

- Avoid Common Pitfalls (Continued)
  - Unable to ask questions about position or organization
  - Aggressive behavior
  - “Know it all” behavior
  - Perceived lack of confidence
  - Expects “too much, too soon”
  - Indecision and hesitation
  - Perception of “shopping around”
- Points to Remember
  - First impressions count
  - Know your goals and what you can contribute
  - Review the contents of your resume or curriculum vitae
  - Be punctual
  - Be well groomed
  - Plan and prepare: know the position and the organization
  - Greet the interviewer with a smile and firm handshake
  - Be honest
  - Act natural and be yourself
  - Do not fidget with clothes, hair, pen, etc.
  - Listen attentively
  - Remember your manners (e.g., thank you)
  - Avoid vague language (e.g., “ah”, “you know”, “ I mean”, “sort of”, “like”)
  - Stress your strengths without bragging
  - Don’t be afraid to say “I don’t know”
  - Don’t volunteer weaknesses
  - It is generally considered acceptable to take a folder suitable for making notes
- Questions
  - Rehearse answers
  - Most frequently asked questions during interviews
  - Be prepared for other questions

## **V. Application Forms**

- Fill out completely
- Rely on your resume or CV

## **VI. Employment Agencies**

- Pros
- Cons

## **VII. Sample Interview Questions**

### **Personal Attributes**

- Tell me about yourself.
- Are you pleased with your career choice to date?
- Where do you see yourself three years from now?
- Where do you see yourself ten years from now?
- Who are your role models?
- What are your greatest strengths?
- What are your greatest weaknesses? What have you done to minimize your weaknesses?
- How would your classmates describe you?
- What motivates you to do your best?
- Who has been the greatest inspiration in your life? Why?
- If there is one thing you could change about yourself, what would it be? Why?
- How do you define success? Are you successful?
- What does success mean in your life?
- What have been your most significant accomplishments?
- What effect has competition played on achieving your accomplishments?
- Do you prefer to work with people, data or ideas?
- What else should I know about you?

### **Professional and Other Employment Experience**

- As a student pharmacist, how did you spend your summers?
- What have you learned from your internship. practice or research experiences? Which of these experiences did you enjoy most? Why?
- Who was your best practice experience preceptor? Which of their qualities or attributes did you like the most?
- Considering your current or past supervisors, who did you like most? Why?
- Considering your current or past supervisors, who did you like least? Why?
- What did you like most about your current or last position?
- What did you like least about your current or last position?
- To date, what professional accomplishment has given you the most satisfaction?
- What will your previous employers say about you?

### **Educational Experience**

- What is the best thing about your pharmacy education?
- What is the least favorite thing about your pharmacy education?
- What was your favorite course? Why?
- What was your least favorite course? Why?
- What should be done to improve pharmacy education?
- Describe the most significant written document or presentation you have completed as a graduate student. What made it special?
- What will faculty members say about you?

### **Knowledge about Issues Facing the Profession**

- Why did you choose Pharmacy as a profession?
- What major challenges do you think the profession will face over the next ten years?
- What measures can pharmacists take to reduce medication errors?
- How will certification of pharmacists advance the practice of the profession?
- Should pharmacists be able to prescribe medications?
- How would you advise a patient consumer to choose their pharmacist?
- How can technology enhance the role of the practicing pharmacist?



### **Technical Knowledge**

- Review the following case of a patient with a lipid disorder and high blood pressure (or any common chronic / acute disease or diseases). Outline a treatment plan.
- Review the following clinical trial protocol. Outline a plan of action for submitting data to the FDA for drug approval.
- Review the following draft of a grant proposal. Develop a budget proposal.

### **Leadership Qualities**

- In what campus activities have you participated? How did this benefit you?
- Describe your leadership experiences as a student pharmacist or graduate student. What did you learn from this?
- Are you a leader or a follower?

### **Situational/Behavioral**

- What was the most difficult decision you ever made? How did you go about this?
- Describe an obstacle that you encountered in your research experiences that demonstrated your analytical ability.
- Describe a time when you were faced with a stressful situation in a class or research experience. What did you do?
- Provide an example of an important goal you set and tell me about your progress in reaching the goal.
- Describe a time when you used your analytical skills to gain information to solve a problem. How did you analyze the information to reach your final decision?
- Provide an example of your ability to work with other people in a work setting.
- Describe a situation when you failed. How did you deal with this?
- Describe a situation where your idea was criticized. How did you deal with the situation?
- Describe a situation when you received negative feedback from your supervisor at work. How did you respond?
- Give me an example of your contribution as a member of team.
- Describe how you deal with frustrations while conducting research.

### **Employer and Position Specific**

- What are your career goals?
- Why do you want to work with our organization?
- What interests you in our organization?
- What skills and abilities would you bring to our organization?
- What criteria will you use to evaluate your future employer?
- What do you think determines an individual's success in a good organization?
- What are the greatest challenges facing organizations such as ours?
- What distinguishes you from all the others who can do this same job?
- What kinds of decisions are most difficult for you?
- If you were hiring a graduate for this position, what qualities would you look for?
- What three things are most important to you in your job?
- How does our position compare with your overall expectations?
- What is the single most important factor for you when considering this position?

### **Work Environment and Habits**

- Do you like to work independently or as a team member?
- How would you describe "teamwork?"
- What management style serves as the best motivator for you?
- Are you able to work on several tasks at once?

### **Questions the Interviewee May Consider Asking**

- Who would be my supervisor?
- What would be some of my responsibilities?
- How would you describe the management style of the supervisor of this position?
- How is performance evaluated and how often?
- What does it take to be successful in this position?
- How do you see me fitting in with your organization?
- In what ways does your organization promote learning for employees?
- What are the greatest challenges for new employees with your organization?
- What are the major challenges faced by your organization?
- What opportunities for professional development are provided?
- What type of orientation would be provided for me?
- What is the next step in the hiring process?
- What types of pharmacists tend to be successful in your organization?
- Is there any additional information you need to know about me?

### **Questions to Avoid Asking the Interviewer**

- What is your salary offer?
- What is the estimated value of your fringe benefits package?
- How much vacation will I get?
- What is the turnover rate among professional staff with your organization?
- What is the earliest estimated time for a promotion?

### **Examples of Undesirable/Illegal Questions by Job Interviewers**

- Are you a U.S. citizen?
- Where were your parents born?
- How old are you?
- What is your birth date?
- What is your marital status?
- What does your spouse do?
- Have you ever filed for bankruptcy?
- What memberships do you hold in social, religious and community groups?
- Do you plan to have a family? When?
- How many children do you have?
- What are your child care arrangements?
- Do you have any disabilities?
- Have you ever received worker's compensation?
- What is your medical history?
- Do you have any pre-existing health conditions?
- Have you had any recent or past illnesses or operations?
- Have you ever been arrested?
- If you have been in the military, were you honorably discharged?

\* Reference Source: Reinders TP. THE PHARMACY PROFESSIONAL'S GUIDE TO RESUMES, CVs AND INTERVIEWING, 3rd edition, American Pharmaceutical Association, Washington, DC, 2011.

## **DEVELOPING YOUR CURRICULUM VITAE AND PERSONAL STATEMENT**

Cathi Dennehy, PharmD  
Joshua Caballero, PharmD, BCPP

Your curriculum vitae (CV) is essentially a summary of your professional and academic career to date. Many residency program directors (RPDs) rely on it to deliver a snapshot of your accomplishments in order to formulate their initial opinions about you. Along with the CV, you will be asked to provide a personal statement (PS). Typically, the PS is intended for you to state your program interest, individualize the reasons for targeting their program, and describe how your strengths can be an asset to the institution. The PS provides an introduction of who you are and also allows an RPD to gauge your writing skills (e.g., can you write in complete sentences, use appropriate grammar, get your point across) and assess your judgment. The CV and PS (and supplemental materials when applicable) combine to form one of the key factors used to determine your eligibility for an interview. Therefore, this chapter will highlight how to make your CV and PS stand out in a positive manner.

---

**Some institutions require supplemental materials that involve essay responses related to specific questions about you or examples of past behaviors in a professional setting or career path. Similar to the personal statement, they are used to gauge your writing style and judgment.**

---

### **CURRICULUM VITAE**

Students commonly ask how their CV can be creative and distinctive. The simple answer is to be truthful and organized, while highlighting areas of

## 22 Chapter 2: Developing Your Curriculum Vitae and Personal Statement

significant involvement with professional and creative activities. The organization and format of your CV should be easily readable and allow the reader to locate information quickly. When developing and updating your CV, it is important to explore various templates and styles. The student affairs office at your institution should have several examples to review. You may also solicit upperclassmen or pharmacists who serve as educators or clinicians to share their CV. Once you have an idea of how your CV will look stylistically, it is time to organize it. Organization and layout are key for ensuring a logical flow that enhances the reader's ability to process its contents.

Prior to assembling your CV, organize your accomplishments into categories by dates (see Appendix A: Preparing Your Curriculum Vitae: Format and Headings). If there are gaps in your educational or professional work experience timeline, consider addressing these in your PS. Below are recommendations that will provide you with a guide on having a polished CV that will impress.

### Stylistic Tips

#### **Create a CV with length suitable for your needs**

One question often asked is, "How long should the CV be?" The answer: *as long as it needs to be*. Do not worry about your CV length: it is highly unlikely that your CV will be 15 pages long. CVs that include more versus less information about your roles and responsibilities in your advanced pharmacy practice experiences (APPEs), professional activities, and scholarship activities are preferred. However, do not embellish your accomplishments. Most RPDs have seen countless CVs, and it is second nature for them to detect an artificially enhanced narrative. Again, there is no page limit to a CV. If the information you are including is pertinent to describing your character, commitment to your profession/public service, and professional accomplishments, then it belongs in your CV.

#### **Use professional quality stock paper and appropriate color paper for printing your CV**

White or an off-white/light tan/light gray, with or without a light watermark, is acceptable as long as it looks professional. Avoid lines, designs, or anything that distracts from the content. You want people to remember your CV for the content, not the color or background designs. Choosing to place the

CV into a separate folder/clear cover is a personal choice and is not required—as long as the cover/clear folder is professional, go ahead. In the end, it is the content of the CV that matters and not the cover that it is in.

---

**Some decisions that students make will not be universally agreed upon by residency program directors (RPDs). As such, we feel RPDs will judge your curriculum vitae on content highlighting your accomplishments.**

---

### ***Avoid using fancy fonts***

Font selection for your CV is a personal choice. For the purposes of readability it is fine to use sans-serif fonts or serif fonts as long as you are choosing a font that is easily legible. The style of the font you choose should also promote easy readability (e.g., Arial or Times New Roman) and not be too fancy (e.g., *Lucida handwriting*, ALGERIAN). The font used for subheadings should be boldfaced and of a conventional font size that is easily readable (14 pt) while all other text should be standard 12 pt.

### ***Be consistent***

All formatting should be consistent throughout your CV. CVs that have formatting changes from page to page (e.g., differences in font, indentation, heading style – some are underlined while others are set in boldface) reflect poorly on you. Failure to be consistent with formatting is analogous to a preventable medication error; each suggests a lack of attention to detail that can prove deleterious to a patient or to your candidacy.

---

**Proofread your curriculum vitae after you convert it to a portable document format (PDF). Page breaks and settings are often different than intended, especially when using free online programs.**

---

### **Organizational Tips**

Hopefully, you've been updating your CV regularly. However, if you are putting it together for the first time since you began pharmacy school, you have a lot of work to do (which is not a bad thing... that may just mean you have been busy). Remember to organize your activities into specific headings.

## 24 Chapter 2: Developing Your Curriculum Vitae and Personal Statement

Appendix A: Preparing Your Curriculum Vitae: Format and Headings provides examples of common headings used for pharmacy CVs. However, below are additional tips to make sure your CV effectively conveys your work.

### ***Clearly state your name and how you can be reached***

Your name and contact information should be placed on the top of the first page. It should include a reliable address (mail and e-mail) and a phone that you can be easily reached at, such as your mobile phone.

**If not using your pharmacy program's e-mail address, use a professional e-mail address (e.g., johnsmith@XYZ.com).**

### ***Provide explanations for items***

All activities and acronyms in your CV should be clearly explained. You should not expect the reader to interpret these on their own, as in some cases they may be misinterpreted to mean something they are not. The person reviewing your CV may be a practicing pharmacist, an administrator far removed from clinical practice, or a representative from human resources. You should not assume that everyone knows what activities, terms, or acronyms mean.

### ***Arrange items in reverse chronological order with most recent first***

Having dates stand out in a column to the left with the activity stated to the right is one approach to cleanly represent the temporal progression of your activities and experiences. Too often, students will group accomplishments, one after the other and then state the time period within the text of the accomplishment, where it can get lost.



### ***Describe APPE roles and responsibilities***

The residency year is centered on cultivating clinical skills, organizing and managing patient data, multitasking, and communicating effectively. Therefore, these are all prime characteristics to highlight in your role descriptions for APPEs. With this in mind, more versus less information about your clinical roles and responsibilities is desirable. For past APPEs, provide four to five bullet points or a short narrative piece about the scope

of your responsibilities underneath each APPE listed. Highlight characteristics that show a higher level of responsibility. You may want to address the following questions:

- How many patients did you follow daily?
- Did you round with the medical team/preceptor?
- How were your recommendations communicated?
- Did you write chart notes?
- Did you advise the team during rounds?
- Did you make recommendations to the primary preceptor who communicated these to the team during rounds?
- What other activities did you perform (e.g., daily vital signs, medication administration record [MAR] review, pharmacokinetic drug monitoring, medication reconciliation, patient discharge teaching/counseling/facilitation)?
- If your APPE was one in which you were not afforded much independence, how did you attempt to create a more fulfilling role for yourself by reaching out to your preceptor, patients, and team to provide a greater level of service?

---


**It demonstrates a great deal of character if you find yourself on a rotation with negligible patient and team interaction, but you step up, show self-initiative, and try to work within the existing system to provide additional valued pharmacist services (some of which may even be new to the service model).**


---

If you have not chosen your APPEs yet, you should familiarize yourself with APPE responsibilities in advance of choosing or ranking them. For future APPEs, obtain a description of your role from the preceptor or your institution's experiential administrator and include this on the CV.

### ***Highlight honors and awards***

This is a section that sometimes gets missed. If you were a recipient of an honor or award during pharmacy school, make sure you have this section

to highlight it. You go back to any academic awards you have received such as National Merit Scholarship or Dean's Award; however, an award for being an outstanding social coordinator for your undergraduate fraternity should be omitted.

***Include your professional work experience***

Highlight any professional work experience while in pharmacy school. If you have experience as a research assistant or in a community pharmacy setting as a technician or intern, include it. Similar to the honors and awards section, including any involvement that extends into the undergraduate years pertinent to your professional roles and responsibilities as a future pharmacist, researcher, educator, leader, and involved public citizen, is appropriate. If you graduated from a particularly notable high school environment (e.g., Jesuit program, Charter/College preparatory school), you may include it since it may serve as a point of reference/discussion since the RPD may have come from a similar school and place an emphasis on it.

---

**A commonly asked question is, "How far back and to what level of accomplishment should be included on the curriculum vitae?"**

**The answer is simple: stick to professional activities or awards, such as working as a research assistant in a biology laboratory.**

**Your work at a fast food restaurant should be left out.**

---

***Provide examples of leadership and professional activities judiciously***

Most RPDs will seek out examples of involvement and leadership to evaluate you. However, do not misinterpret this to mean more is better. Due to increases in the number of applicants to residencies and number of available residencies, students mistakenly view the *quantity* of involvement as being more relevant than the *quality* of involvement. In reality, it will be much more valuable for the program to understand your motivations to become involved with any particular organization. Therefore, if you have been with five professional organizations over the course of your PharmD curriculum, but your level of involvement or roles are unclear or poorly defined, it will appear less meaningful than if you were involved in two professional organizations in which you were genuinely interested and



took on a major role (e.g., officer position, organizing chair). Since your time as a student is finite, you should prioritize activities where your interest is genuine.

### ***Feature types of presentations separately***

Why separate them? In general, we believe most RPDs place a higher value on presentations and posters given at a professional meeting than on those presented on a rotation. Therefore, presentations should have their own heading. Presentations given as part of an introductory pharmacy practice experience (IPPE) or APPE should be separated out under a subheading (e.g., IPPE and APPE Presentations). If you have presentations or posters that were not completed during an IPPE or APPE, they should be separated under their own subheading (e.g., Professional Meeting Presentations and Posters). For posters, include each author's name (last name and first initials) in the order of authorship. Be sure you boldface your name so that it is evident that you contributed to the poster. This also helps the reader quickly identify your place in the project; a touch always appreciated by those evaluating your CV. Additionally, consider highlighting your contribution by listing one or two bullet points immediately beneath the poster. If authorship was listed by alphabetical order, a bullet stating this may be justified.

The appropriate way to list a professional poster is to include authorship; title of the poster (not capitalizing all the words in the title); name of the meeting at which it was presented; the city and state the meeting was held; and the month and year of the presentation. Appendix A: Preparing Your Curriculum Vitae: Format and Headings has an example of such presentations.

**If you had a name change during your education, setting your name in boldface type is a good way to indicate that this is you.**

### ***Be careful when listing publications***

Many professional poster presentations at professional meetings will have the corresponding abstract published in the organization's journal. Some, however, are not. If you have a poster that also resulted in an abstract publication, list this as a poster on the CV as described above. If you have a published abstract affiliated with a poster, it may be included under a

Publications heading; however, state so with brackets at the end of the citation (e.g., [abstract]).

## **PORTFOLIO (OPTIONAL)**

A portfolio is a binder in which you organize a professional copy of all your pertinent presentations, drug monographs, or journal clubs (e.g., given during APPEs), posters, or any other activities during pharmacy school you may be particularly proud of. Some pharmacy programs require that you create a portfolio and update it periodically. Even though it is not a requirement for most programs, some students make one and take it with them to the ASHP Midyear Clinical Meeting (MCM) to share during Personnel Placement Service (PPS) or to their on-site interviews. The purpose of the portfolio is for RPDs (and anyone else interviewing you) to view your work and see what you've done throughout pharmacy school. Additionally, portfolios can also be constructed online (often via software provided by the pharmacy program) and may be shared with RPDs or other relevant personnel in a more flexible manner.

**Please remember that similar to your curriculum vitae, anything in your portfolio is fair game during the interview process.**

## **PERSONAL STATEMENT**

Do not underestimate the value of the PS. The PS is what gives RPDs a hint of your writing style: basically, it lets them know if your written communication skills are a strength or a weakness. Therefore, a poor PS can doom your application. Generally, we encourage students to remember that the PS is not a creative writing assignment but is intended to show that you can explain yourself clearly, use correct grammar and punctuation, and relay a clear message that answers the essay question(s) being asked. With Pharmacy Online Residency Centralized Application Service (PhORCAS), you will have the opportunity to personalize and upload your PS.

**Do not forget that supplemental materials, such as essays to proposed questions, should also have proper grammar and punctuation and relay a clear message.**

The PS format is similar to a standard business letter and should be printed on the same type of paper as your CV. Single-spacing is appropriate, and each letter should be addressed with the exact name and title of the individual who is hiring or the name of the RPD. Never send out a letter addressed to “Dear Sir” or “Dear Program Director.” The general format of a PS is as follows:

- **First paragraph:** Introduce yourself and state the specific position you are seeking. State what your professional goals are; avoid being vague. Be specific regarding your goals and future plans. They may change over the course of your residency, but RPDs want to interview applicants who say they have a *plan* and “I hope to be ....”
- **Second paragraph:** Highlight the reasons the RPD or residency committee should consider you for the position. Address what you feel are your most important skills, attributes, or past experiences as they relate to the position you are applying for—do not restate your CV. If you are applying for a postgraduate year-2 (PGY-2) or fellowship position, you should state how this additional training will further your career interests and objectives. This could be a separate paragraph or included in paragraph two.
- **Third paragraph:** Bring closure to the letter and state what you will do or what you expect the RPD to do. For example, you could specify that you will wait for them to call and arrange an interview.

### **Additional Points to Keep in Mind**

#### ***Avoid cutting and pasting your personal statement***

The practice of recycling written work that you’ve prepared for one program for another program is not recommended as the question(s) being asked may differ, as will programmatic strengths. Every year, RPDs receive a subset of

applications where candidates have mistakenly listed wrong institutions' names in their PS. This lack of attention to detail can make the difference in whether you are offered an interview or not.

***Use proper grammar***

Poor use of grammar is another preventable red flag that stands out in the PS. If you know in advance that you have some difficulties with verb tense or word choice, have your PS reviewed by a family member or friend and then proofed a few more times for accuracy prior to submitting your application. Also, some faculty may be happy to review your written assignments (e.g., PS, responses to essay questions) and offer suggestions. It is important to realize that faculty have multiple professional and personal responsibilities—do not take offense if they are not able to do this for you. If you are going to seek this type of intensive, focused help from your faculty, your best chance of success is to approach one you have an existing rapport with and give them ample time to review your work.

***Highlight how program elements fit with your professional goals***

How will completion of the residency program fit into your career path? If you really want to impress the RPD, you can also mention in the PS specific research being conducted at the institution you are applying to (e.g., “I talked to applicants from your program and here is what they said...” or “This impressed me as I’m looking for \_\_\_\_\_ in a PGY-1 residency.”). If the content of supplemental materials (e.g., essays) required by a program overlaps with some of the content of your PS, view it as an opportunity to include different elements in your PS that are not already discussed in your supplemental materials.

***Avoid too much personal information***

Personal information pertaining to age, relationship status, religion, and political beliefs should generally be avoided. Your PS and supplemental materials speak to your professional judgment. If you are communicating information that is too personal, an RPD may have some reservations. For example, if an essay question asks you to describe a personal or professional challenge and how you overcame it, it would be more appropriate to

discuss a professional/academic challenge than to discuss challenges from personal relationships. In some cases, references to personal challenges can be introduced as part of an essay question, if this is the intent of the essay question. For example, if an applicant or family member has had experience with “lack of access to medicine or healthcare,” this may relate to how you wish to shape pharmacy practice and improve access to medications. The key is to use this as an opportunity to focus on the professionalism you gained or maintained in spite of the personal challenge.

**Keep it brief**

Try to limit your PS/supplemental materials to one page. RPDs seek applicants who can convey their ideas and points succinctly. *Remember: attention to detail is key.*

**Promote yourself, but avoid bragging**

Your CV highlights all areas of involvement. If you are particularly proud of certain accomplishments, feature these (maybe the top two) in your PS. Keep in mind though that you are also trying to integrate how this program meets your personal goals and where this fits into your professional future. It is not about restating your CV.

**Set yourself apart**

Be yourself. Again, it is important that you do not view the PS as a creative writing assignment unless otherwise asked to do so. This is also true of any additional supplemental materials or essays. It is never a good thing to be too poetic or flowery in your writing style when it comes to a professional application. Alternatively, a PS that is too generalized is also not strong. Typically, these come from applicants who try to use a general or similar PS for several programs. Therefore, if you focus on your strengths and how that specific program can assist you in your future goals, it should be unique enough to stand out.

In conclusion, your CV and PS are features of your application that will determine whether you are invited to interview. Use this chapter's recommendations to put yourself in a position to get that invitation.



## KEY LESSONS

- Keep your curriculum vitae organized using headings and maintain a reverse chronological order.
- Make sure that your curriculum vitae describes your activities and roles as bullet points as it pertains to research, leadership, advanced pharmacy practice experiences, work experience, and community service.
- Avoid using fancy fonts or paper colors that will distract from your curriculum vitae or personal statement.
- Personalize your personal statement and any supplemental materials by focusing on your strengths.
- Keep your personal statement to one page.
- Ask at least two people to review your curriculum vitae or personal statement for readability and clarity of content.
- Start early. Do not wait until a month before residency applications are due to start your curriculum vitae. If you add to it gradually over the course of your pharmacy school education, you are certain to have captured everything.

# INTERVIEW PREP 101

---

## PRIOR TO INTERVIEW

- **Research residency programs** and have questions prepared that cannot be answered by the program website or pamphlet.
- **Look at agenda for the interview** and have specific questions for each interview session (especially with the director of the program). Perform a background search on the interviewers so that if you have extra time you can ask them specific questions about their background or job. Also look at the agenda to see if they will require a written test or presentation. Look at the residency director closely. ( i.e. how long have they been director? what is their practice area? where did they train?)
- **Have a professional portfolio** (leather) notebook to take with you on interviews, so that you can keep your extra copies of resumes, pen, and paper for notes in one location.
- **Review your CV.** Interviewers may ask you about anything that you have placed on your CV.
- **Practice answering questions**, with friends or in front of a mirror. You never know what you are going to say until you have to actually say the words. Make a list of 4 accomplishments that you have enjoyed. Think of 2 large decisions you have made recently and be able to describe how you made those decisions.
- **Preparing for interviews out of state:** Plan travel arrangements to and from the airport, coordinate a place to keep your luggage during the interview, find a hotel that is close to the hospital, figure out transportation to and from the hospital. Make sure you know where the interviewing site is located and how long it takes to get there.

## DAY OF INTERVIEW

Remember, you are qualified for this position but you will not get it unless you nail the interview! This is your chance to show them that you know what a residency is, you're definitely interested in their particular program, you're highly motivated, you work well with others, and you have a clinical mind. Just about everyone gets asked a question that they are not ready for. If you get asked the same question throughout the day, answer it as if it is the first time you have been asked it. Try not to answer just "yes" or "no" to questions, you want to make it a conversation and let them know as much about you as you possibly can in the short period of time that you have.

- Dress professionally: suit, closed-toed shoes, minimal jewelry, NO gum
- Turn cell phone OFF (vibrate can still be heard during the interview)
- Plan to arrive 15 minutes early. Do NOT be late!
- Lunch or downtime with the current residents is still considered part of the interview! Watch what you say. This is a great time to ask questions about the program...ex.
  - do you hang out together as a group
  - how often do you interact with the resident director
  - What are your thoughts on how pharmacy is received in this hospital
  - If you could change something about the program, what would that be
- Write down notes after each interview so that you remember everything about the program and so that you have ideas to personalize a thank you note

## AFTER THE INTERVIEW

- Write a "hand-written" thank you note to the interviewers (especially the program directors). These are best if written the DAY OF the interview and mailed out. Just make sure that you send a thank you note (email/handwritten) to EVERYONE who took the time to interview you.
- If you decide not to participate in the Match, contact the programs to let them know

## **SAMPLE QUESTIONS**

### **...TO ASK ON AN INTERVIEW**

Good to have written down prior to the interview and bring them with you. When they ask if you have any questions, **YOU HAVE TO ASK QUESTIONS.**

- What are some of the former residents doing now?
- Are there any teaching/precepting opportunities? (ask if not on the website, if on website may ask for them to elaborate on the experience)
- Tell me a project a current resident is working on.
- What makes your program unique or successful?
- Describe your typical day at work. Do you have any interactions with the residents?
- What is your favorite part about your job?
- What made you get involved in the residency process?
- How do expectations change for a student on rotation to a resident on rotation?
- What organizations are you involved with (is you suspect involvement)?
- How flexible are rotation schedules? Can I change rotations that have been scheduled in the spring?
- How easy is it to get a desired elective rotation?
- Are there any opportunities to publish? How about outside of my research project?
- How are residents evaluated during the program?
- Has the pharmacy and residents ever worked with the medical department on research projects?
- What is the current pharmacy model? Are there any changes for the future?
- What clinics are available during the ambulatory care rotation (if not available on website)?
- Are there opportunities for leadership development?
- Have there been any significant changes in the residency program this year? Are there any changes planned for next year?
- What is the vision for the pharmacy department?

### **...HAVE BEEN ASKED DURING AN INTERVIEW**

- What made you interested in this program?
- What made you want to do a residency
- Tell me about yourself (have a summary prepared)
- What drove you to the profession of pharmacy
- Tell me about a time you impacted a patient's healthcare
- What is your biggest strength (don't just say it..elaborate on how it will help you with the residency)
- What are some of your weaknesses (don't just say it! Elaborate on how different aspects of their program will help you to work on this weakness or state how you consider this a weakness but it is also a strength....always put a positive spin on this!)
- Tell me about the hardest job you have had to perform
- Tell me about a time you did work you didn't find valuable and how you dealt with this
- Where do you see yourself in 5 years? 10 years?
- Are you a team player?
- What was your least favorite rotation and why?
- Tell me about a time when your carefully laid plans were fouled up. How did you react? What happened?
- Describe how you scheduled your time on an unusually hectic day. Give a specific example.
- IF you had to live your life over again, what would you change?



- How has your education prepared you for your career?
- What is your least favorite aspect of where you work now?
- What do you think is the biggest issue facing pharmacy today?
- Have you done anything to improve yourself this past year? What?
- Have you read something that's changed your life?
- If you were stranded on a deserted island, what two drugs would you take with you?
- What do you like to do in your free time?
- What else do you think that I should know about you?
- Why do you think that you deserve the position?
- So, what questions do you have for me? (this has been asked at the beginning of an interview by a program director, be prepared to fill some time with questions)
- Describe what you do to 'keep up with the literature' and tell me a me about a recent paper you've read or a presentation you have attended
- What was your most rewarding moment during your job/experience/rotation/etc?
- What would your coworkers say about you?
- Who among all your teachers and mentors has had the most influence on you and why?
- What situation, in our current position, do you wish you had handled differently?
- Give me an example of a conflict you have encountered on your rotations and what you did to resolve that conflict?
- Some of your preceptors will not have PharmD degrees, do you have any issues taking directions from someone with a lesser degree?
- Give me an example of a leadership project or position you have been in?
- Give me an example of a team situation you have worked in, what was your role within the team, and did you experience any conflicts?
- I see from your CV you have done a presentation about \_\_\_\_\_, what can you tell me about \_\_\_\_\_?
- (if person is male) Would you have issues taking directions from a female?
- (if late in the interview day) What has surprised you about this site or residency program so far now that you are onsite?
- What was your favorite non-pharmacy job, and why?
- What was your favorite and least favorite rotation, and why?
- We all have to bend the rules at one time or another. Give me an example of when you had to bend the rules and how you handled the situation.
- Give me an example of an instance where you disagreed with how the team handled a specific problem and how you handled the situation
- Tell me why I should choose you over your peers for this residency.
- Why have you selected this institution? And, what do you think you will bring to our program?

Materials referenced here have been adapted from "Residency Prep 101: What to Do While You are Still in Pharmacy School" presented by Dr. Shannon Holt at the ACCP ESCP International Congress on Clinical Pharmacy in Orlando, Florida on April 26. 2009.

## Letter of Intent Example

Shannon L. Holt  
6900 Crescent Moon Ct. #307  
Raleigh, NC 27606  
December 21, 2007

Double check the spelling of names

Beth McLendon-Aryik, Pharm.D  
Pharmacy Residency Program Director  
Duke University Medical Center  
Erwin Road, DUMC Box 3089  
Durham, NC 27710

Dear Dr. McLendon-Aryik:

statement of interest

I am writing this letter to express my sincere interest in the Duke University Medical Center's American Society of Health-System Pharmacists (ASHP) accredited Postgraduate Year 1 (PGY1) residency program. I have had the pleasure to speak to current and past residents, and I have been very impressed with the opportunities that would be afforded me within your program.

Duke University Medical Center has everything that I am looking for in a PGY1 program. The appealing components consist of multidisciplinary interactions, presentation and research opportunities, a diverse patient population, and many networking opportunities. These components are important aspects to perfecting the practical experience and didactic components, as well as the leadership and research skills afforded via my on-the-job training at WakeMed Health and Hospitals and UNC's Doctorate of Pharmacy training. Additionally, the wide selection of elective rotations will provide me an excellent resource for mentoring in what I hope will be the next phase of my professional training, completion of a PGY2 program in transplant or infectious diseases.

Additionally, I strongly feel the program's training will facilitate both my short and long term career aspirations. I want a wide variety of experiences in order to enhance my skills, and the opportunity to interact with patients in order to become a proficient and well rounded clinical pharmacist. For this reason, the longitudinal experience in ambulatory care is very appealing. My short term goals are to obtain a pharmacy practice (PGY1) residency, followed by a PGY2 residency in one of my interest areas. My interests include infectious disease, transplant, and cardiology. During my residency experience, I hope to enhance my clinical expertise in addition to expanding my skills in research and administration. After completion of my residency training, I plan to seek a position where I can teach, conduct research, and maintain a clinical practice.

Thank you for considering my candidacy for the pharmacy practice (PGY1) residency at Duke University Medical Center. Please let me know if there is any additional information I can provide.

Sincerely,

2nd and 3rd paragraph: why the program appeals to you and what skills/interests you have to make a good candidate

Shannon L. Holt  
PharmD Candidate  
University of North Carolina Chapel Hill

## Letter of Intent Example

Name

Address

Hampton, VA 23669

Beth McLendon Arvik, Pharm.D.

Assistant Director of Pharmacy

Director, Pharmacy Practice Residency

Duke University Hospital

DUMC Box 3089

Durham, NC 27710

To Whom It May Concern:

I am applying for the Pharmacy Practice Management / Masters Degree Program residency. I recently had the privilege of speaking with pharmacy residents at the American Society of Health-System Pharmacists midyear conference. Their enthusiasm and zest further strengthened my desire to participate in the pharmacy administration program. Pharmacy has been an interest since attending a biomedical symposium my junior year in high school. After learning more about the profession, I developed a passion for pharmaceutical healthcare and I made attending Hampton University's School of Pharmacy my top priority. While attending Hampton University I was selected as a fellow for the William R. Harvey Leadership Institute. Participation in the Leadership Institute helped to further develop my leadership and public speaking skills.

I am a hardworking, team-oriented individual who is prepared for the challenges associated with the two-year pharmacy administration program. My professional goals are to obtain a position in pharmacy management and to utilize my knowledge and leadership skills to encourage and promote innovative ideas to advance professional pharmacy.

The kind of training offered by your program is compatible with my career interests. After researching your curriculum and speaking with residents associated with your hospitals, I understand that your program's mission is to provide pharmacists with the knowledge and skills necessary for balancing operational management, cost of care, and patient safety while maintaining quality healthcare. These skills create a more competent and efficient pharmacy leader. Throughout my training at Hampton University I balanced schoolwork and employment as a pharmacy intern at a grocery chain pharmacy. While attending Hampton University, I held leadership positions in several of the pharmacy school's professional organizations. I am confident the Duke University Hospital pharmacy residency will enhance my training and cultivate other proficiencies.

I firmly believe that I have the intellect, skills and talents necessary to succeed in the pharmacy administration program. I value leadership, teamwork, honesty, and ethics. My strong desire to contribute to the advancement of pharmaceutical care continues to drive me to succeed and to accomplish my goals. I look forward to speaking with you and members of your department regarding my application. My curriculum vitae and application are enclosed for your review. If there are any questions please do not hesitate to contact me. Thank you for your consideration.

Sincerely,

Applicant Name, Pharm. D. Candidate

## Letter of Intent Example

Applicant Name  
Address  
City, State ZIP

December 27, 2007

Dominic Ragucci, Pharm.D., BCPS  
Residency Program Director - PGY1 Pharmacy Residency  
MUSC Medical Center and College of Pharmacy  
43 Sabin Street, QE 213, PO Box 250132  
Charleston, SC 29425

Dear Dr. Ragucci,

I am writing to express my interest in the Medical University of South Carolina PGY1 Pharmacy Residency Program. I enjoyed learning about your program at the Residency Showcase at the ASHP Midyear Clinical Meeting. Your residency offers many experiences which I am looking for in a first year post-graduate program, including a variety of rotation opportunities, teaching and research experience, and a challenging environment where I can advance my skills as a clinical pharmacist.

Over the past four years, I have been active in the School of Pharmacy at the University of North Carolina where I have served as a class leader, instructed first-year pharmacy students, and participated in student organizations. This year, I was the recipient of the Pharmacy Foundation of North Carolina George T. Cornwell Scholarship, which recognizes students who have demonstrated integrity, commitment to pharmacy, and a capacity for leadership. For my fourth year rotations, I was honored with acceptance into the Clinical Scholars Program at the University of North Carolina Hospitals. This is a competitive program that offers a more rigorous set of clinical rotations and is offered only to those students who demonstrate an advanced clinical aptitude. As a Clinical Scholar, I have had the opportunity to participate in research to help improve patient care at the UNC Infectious Diseases Clinic. As a supplement to clinical rotations, I also work as a pharmacy technician at Duke University Medical Center. This has afforded me practical pharmacy experience and given me valuable insight into the components of a successful distribution mechanism. I have also learned the importance of teamwork to providing patients with the best care possible. Collectively, I feel my experiences have deepened my desire to exceed in the profession and will prepare me to succeed as a resident.

Upon completion of a PGY1 residency, I plan to pursue specialized training. My current areas of interest include critical care, internal medicine, and transplant pharmacy. After training, I plan to become board certified in pharmacotherapy and pursue a career at an academic teaching hospital as a clinical specialist. My long-term goal is to be involved in academia giving didactic lectures and precepting students. I find your program's teaching certificate and opportunity to precept students an appealing component. I believe training at the Medical University of South Carolina will help me achieve my career goals.

Based upon my knowledge of your program, I believe I would be an excellent fit. I am a hard worker with great time management skills, have experience in research, and demonstrate dedication to pharmaceutical care. If given the opportunity, I will work hard to contribute to the Medical University of South Carolina tradition of training exceptional clinicians and leaders in our profession. Please find my application materials enclosed. I look forward to the opportunity to visit your institution. Thank you for your consideration.

Sincerely,

Applicant Name  
PharmD Candidate, year  
School of Pharmacy

# Interview Skills Packet for Residency Candidates

## Commonly Asked Questions of Interviewees

**Please Note: Members of the ASHP Pharmacy Student Forum Career Development and Education Advisory Group prepared this document to assist student pharmacists in with their interview preparation.**

### Introductory Questions

- Tell me about yourself
  - Prepare a ~2 minute long summary
- What is your biggest strength? What is your greatest weakness?
  - Prepare at least 3 of each
  - Give examples of times you displayed these strengths and weaknesses
  - Be able to elaborate:
    - *How will your strengths help you in the residency?*
    - *How can work to improve your weaknesses during residency?*
- How do you handle time-management during a hectic time?
  - Give specific examples from school/rotations/extracurricular activities
- If you had not chosen the pharmacy profession, what career would you pursue? Why?
- What have you done to improve yourself this past year?
- Have you read something that has changed your life? How has it changed your life?
- What do you like to do in your free time?
- What else do you think that I should know about you?
- Why do you think that you deserve the position?
- What do you do to “keep up with the literature?”
- Tell me about a recent paper you’ve read or a presentation you have attended
- What would your coworkers say about you?
- Who among all your teachers and mentors has had the most influence on you and why?
- I see from your CV you have done a presentation about \_\_\_\_\_. What can you tell me about \_\_\_\_\_?
- Tell me why I should choose you over your peers for this residency
- What are you most proud of? What are you most proud of that is not on your CV?

### Residency-Specific Questions

- What made you interested in this program?
- Why have you selected this institution?
- What do you think you will bring to our program?
- What made you want to do a residency
- What drove you to the profession of pharmacy?
- How will this program prepare you for your career goals?
- Where do you see yourself in 5 years? 10 years?
- You are required to take specific rotations as a part of this residency. How will these help you in your pharmacy career?
- What qualities would your ideal preceptor have?
- What do you see as a weakness/strength of this program?

## **Interview Skills Packet for Residency Candidates**

### **Education/Rotation Questions**

- What is the hardest job you have had to perform? Why?
- Tell me about a time you did work you didn't find valuable. How did you deal with this?
- What was your least favorite rotation? What was your favorite rotation? Why?
- How has your education prepared you for your career?
  - Give specific examples from your work/rotation/education/extracurricular activities/leadership experiences
- What is your least favorite aspect of where you work now? Why?
- Describe a time when you felt overwhelmed and explain how you handled the experience

### **Questions Involving Experiential Reflection**

#### ***Clinical Experiences***

- Tell me about a time you impacted a patient's healthcare
- What was your most rewarding moment during your job/experience/rotation/etc.?
- Tell me about a patient that had the greatest impact on you and your perception of pharmacy practice
- Tell me about a difficult patient and how you were able to make an impact on their health
- Tell me about your most memorable patient
- Tell me about a recommendation that was accepted by your team

#### ***Interprofessionalism***

- How do you work with members of other healthcare professions?
- Describe an instance where you had to collaborate with other healthcare professionals to accomplish a goal
- Do you prefer to work as an individual or within a team? Why?

#### ***Leadership***

- Tell me about a leadership project or position you have been involved in
- Give me an example of a team situation you have worked in. What was your role within the team? Did you experience any conflicts?
- Describe your leadership style
- As a leader in the pharmacy profession, describe a situation where you had to motivate others to accomplish a goal

#### ***Problem Solving***

- Tell me about a time when your carefully laid plans were fouled up. How did you react? What happened?
- We all have to bend the rules at one time or another... tell me about a time when you had to bend the rules

## Interview Skills Packet for Residency Candidates

### ***Conflict Resolution and Ethical Dilemmas***

- Tell me about a time you wish you had handled differently. What did you learn from your mistake? How do you wish you had handled the situation?
- Give me an example of a conflict you have encountered on your rotations. What did you do to resolve that conflict?
- Give me an example of an instance where you disagreed with how the team handled a specific problem. How did you deal with the situation?
- Tell me about a time when two people disagreed. How did you arrive at a compromise for the task to be successful/unsuccessful?

### **Just for Fun Questions**

- If you were stranded on a deserted island, what two drugs would you take with you?
- If you were a drug/dosage form, what would you be?

## Questions to Ask Interviewers

---

*Always make sure to thoroughly review the website before asking any questions to ensure that the answers are not already there!*

- What are some of your former residents doing now?
- Are there any teaching/precepting opportunities?
  - If a teaching certificate is available: What are the requirements to obtain the teaching certificate?
- What projects are the current residents working on?
- What do you believe makes your program successful?
- What part of the program are you most passionate/excited about?
- What is a typical day for you (if speaking to a resident or preceptor)?
- What organizations can the residents become involved in during the program?
- How flexible are rotation schedules? Do you tailor the rotations/residency to the residents' interests? Can I change rotations that have been scheduled in the spring?
- How easy is it to get a desired elective rotation?
- Are there any opportunities to publish? How about outside of my research project?
- How are residents evaluated during the program?
- What degree of research collaboration is there between the medical and pharmacy departments?
- What is the current pharmacy model? Are there any changes for the future?
- What clinics are available during the ambulatory care rotation?
- What opportunities are available for leadership development?
- Have there been any significant changes in the residency program this year? Are there any changes planned for next year?
- What is the vision for the pharmacy department?
- How much autonomy is encouraged after the resident is oriented to a new rotation?
- What type of electronic medical record/computer system does the hospital use?

## **Interview Skills Packet for Residency Candidates**

- What was your favorite rotation? Was it the content of the rotation or the preceptors that you liked (if speaking to a resident)?
- What is the relationship between pharmacists and other healthcare providers at the hospital? Are pharmacists' recommendations and opinions valued?
- How often is there an opportunity to round in an interdisciplinary team approach?
- What changes are being made to the residency program based on prior resident feedback?



## Interview Skills Packet for Residency Candidates

### Reflection Log

The STAR method is an interviewing strategy used to deliver all desired information in a story format when asked a behavioral interview question. You can use the following structure to reflect on experiences that will help you answer the “Questions Involving Experiential Reflection.” An example is provided below.

**Question.** Listen carefully, understand the question, and organize your thoughts.

*Ex. Tell me about a time you impacted a patient’s healthcare.*

**S** - Situation (Give background, provide context)

*This past year, I was on my 6-week Internal Medicine rotation at Super-duper Hospital. My team often took care of patients with heart failure, and readmission to the hospital due to non-adherence is a common problem.*

**T** - Task (Describe challenge and expectations)

*We were taking care of one memorable patient who struggled to take his heart failure therapy regimen consistently. During my relatively short rotation, he had been admitted twice. My interprofessional team looked to pharmacy to help improve this patient’s adherence and help keep him out of the hospital. As the student pharmacist on rotation I was up for the challenge.*

**A** - Action (Elaborate on the action you took)

*The first step that I took was to communicate with the patient without judgment. I asked him about his medications one-by-one, then asked how he organizes his medications. He expressed frustration that he had “too many bottles, with too many confusing names on them” and that often times he “gets frustrated and takes them all at once, or just doesn’t bother with them.” I communicated options for easing medication use, and the patient liked the idea of filling a weekly pill box. I was able to obtain a 7-day pill box, and the patient and I filled it together before he was discharged. I followed up with him a week later and he was still effectively using the pill box.*

**R** - Results (Explain the results)

*From this experience, I feel that I helped this patient make the best use of important medications that can improve his life. It impacted the way I view communicating with patients, such that simple communication and identifying patient-specific problems can make a big difference. I will always value patients’ unique situations as a pharmacist.*

## Interview Skills Packet for Residency Candidates

### Reflection Log

---

<b>S</b> - Situation (Give background, provide context)	<b>T</b> - Task (Describe challenge and expectations)
<b>A</b> - Action (Elaborate on the action you took)	<b>R</b> - Results (Explain the results)

## Interview Skills Packet for Residency Candidates

### Notes

---

### References

Holt SL. Residency Prep 101: What to Do While You are Still in Pharmacy School. ACCP ESCP International Congress on Clinical Pharmacy. 2009 Apr 26; Orlando, FL.

Career Services: Wayne State University. Behavioral Interviewing Techniques - The Star Approach. n.d; Detroit, MI.  
<https://careerservices.wayne.edu/behavioralinterviewinfo.pdf>

## INTERVIEW PREPARATION!!!

Whether you are interviewing for a residency or for a job, **preparation** is key. You need to know about the **hiring entity** (residency program or hospital/clinic/company) and about **yourself**. The latter may seem obvious but, when you are nervous and confronted by an interviewer's unexpected question, you may find yourself unable to think of a relevant situation or example from your past to relate. You may end up stammering and "ummming" at best or looking like a deer in the head lights at worse.

So, again, prepare.

**Visit the hospital/clinic/company Web site.** Learn what you can about their structure, program, clients, competitors, etc. During the interview you'll then be able to talk with confidence about what makes them different/exciting to you, and you'll be able to respond to interview questions with appropriate information and ask the interviewer suitable questions. You'll also be better able to determine if the hiring entity and you are a good "fit."

- Know their mission statement! They may ask you about it such as...

**Preparing for questions about yourself** can help prevent or calm those jitters everyone suffers during an interview and permit you to appear poised and professional. Probably the most practical way to prepare for this aspect of your meeting is to stage mock interviews with fellow students or friends. This will point out possible weaknesses (Do you say "Like" or "You know" at lot?) and can simply make you feel more comfortable during the "real deal" since you've already gone through the experience. Ask for honest feedback. Don't forget to ask them about things in addition to the content of your answer—speech patterns (Do you talk too quickly or quietly or use slang?), body language, etc. If possible, you may want to video or audio record the session so you can see and hear yourself as others do.

- Consider your own personal goals

## NOTES ON PREPARING FOR THE INTERVIEW DAY:

### **Planning and timing:**

- Interview at the program you want the most later in your interview schedule (mid/late February; try to avoid March for scheduling interviews). Make sure you have 1-2 "practice" interviews before that (programs lower on your list). It is of the utmost importance to be rested. Practice. Make sure they are rested as well (ie avoid March).
- Find out who you are going to interview with and attempt to get some background.
- Most importantly, make it a learning experience.

### **Do your homework:**

- Try to determine the organizational structure. Know more about the program than what is in the written information. Talking to alumni is a great way to accomplish this.
- What's your relationship to the director of pharmacy? The rest of the hospital? Find out about hospital solvency. Institutional goals and what is it famous for are other useful pieces of information. You may want to do MEDLINE searches on the people who interview you.

### **Your expectations**

- What are their needs and responsibilities? What are they going to do for you?
- Opportunities for growth? How can they help me develop? How much flexibility? Can this schedule change? **HAVE CONFIDENCE!!** What will be the specific responsibilities as a resident? Get them to do some talking. **DON'T EVER BE CRITICAL ABOUT ANYTHING!!**

## POTENTIALLY DIFFICULT QUESTIONS

Every interview candidate dreads being asked certain questions. No matter how much you prepare and practice, you are likely to be asked one or two questions that leave you searching for the right response.

Potentially difficult topic areas might include breaks between employment, getting low marks in a class or a rotation, having been fired or laid off, and the like. In addition, you may be asked illegal or inappropriate questions about your personal life. Anticipate and prepare for the very questions you are most concerned about answering. Here are some other guidelines to consider:

- **Think before answering.** There is nothing wrong with pausing a few moments before responding to a tough question. Say something like, "That's a good question. I'd like to take a moment to think before I respond." This gives you a chance to collect your thoughts.
- **Ask the interviewer to restate the question.** If you don't understand what is being asked, ask the interviewer to restate the question. . The restated question is likely to be clearer and less difficult to answer.
- **Be brief and respond in a factual way.** Interviewees often volunteer more information than is necessary. For example, when asked why you left a previous position, you should avoid saying anything negative about a supervisor (even if it is true). Instead, focus on the skills you hope to bring from a previous position into a new one.
- **Focus on what is being asked.** Illegal questions about age, marriage, and family care issues can be addressed positively by determining the reason for the interviewer's concern. For instance, a woman does not have to answer whether or not she has children; but if this seems to be an issue for the interviewer, she might consider responding, "My career is very important to me and will continue to be and I can assure you that I am dedicated to quality care as a pharmacist."
- **Never lie, exaggerate, or overstate.** When asked direct questions about your work, experience, training, or ability to handle key elements of the job, you must respond honestly. Not only is honesty the best policy; in most cases, deception will only cause more problems for you later on.

## RANDOM ADVICE:

- In responding to questions you aren't as ready for:
  - Ask for the question to be repeated
  - Pause and ask yourself the questions
  - It's ok to have long pauses
- Maintain eye contact when answering
  - If you are in a panel interview, be sure to look at the person who asked the question when you answer, but also make sure to scan from time to time the rest of the panel to show you are engaged with everyone
- Handle interruptions with poise
- Pet peeves of some interviewers:
  - Remember that from the time you are there until the time you leave... that IS YOUR INTERVIEW
  - Being too arrogant
- Be prepared to answer questions multiple times a day
- Review your CV and presentation because they'll ask you about them
  - Understand them, have an opinion about it, how does it affect pharmacy
  - If it's on your CV, it's fair game
  - Brush up on your presentations - they may ask you about it or a journal club you did (aka what was the outcome of the study, what did you think of the study, how do you think it can be applied at our institution?)

- Resident lunches - THESE ARE STILL INTERVIEWS!! Things to ask residents (Be professional, you're still interviewing) What do you do for fun? Housing options?
  - Make sure to ask questions you need to ask, but don't dominate
  - Ask questions, but not all social
- Additional words of advice from interviewing seminar
  - Always use the STAR method when talking about a conflict or situation
  - Situation Task Action Resolution
    - Make sure to describe all of these things when you are answering questions about your activities & experiences
  - When talking about conflict- always end positive
- Phone interviews:
  - Use caller title
  - Take notes
  - Provide short answers
  - Know schedule
  - Establish/meet deadlines
  - Don'ts:
    - Smoke, chew gum, eat
    - Background noise
    - Interrupt speaker
- **Two Minute Drill**
  - Sometimes an interviewer begins with something like, "So, tell me something about yourself." This "soft" question is a good icebreaker but make sure you don't get carried away with your answer. Interviewers aren't really interested in your hobbies, spouse and children, and your last vacation. The best answer is brief (about two minutes long) and focuses on work-related skills and accomplishments.
  - A good answer to this question is about two minutes long and focuses on work-related skills and accomplishments. Tell the interviewer why you think your work-related skills and accomplishments would be an asset to the company. You could describe your education and work history (be brief) and then mention one or two personal character traits and tell the interviewer how the traits helped you accomplish a task at school or work.
  - Think of it in terms of four-30 second themes:
    - Your education
    - What you do (job title or student status)
    - One or two things you've accomplished or excel at that directly relate to the position
    - Why you are applying for this position

Something along the lines of:

I'm in my last year at the School of Pharmacy at Wilkes University in my home town of Wilkes-Barre, Pennsylvania. At the school I \_\_\_\_\_ and I am an intern at \_\_\_\_\_. Recently I \_\_\_\_\_ . Because of my interests in \_\_\_\_\_ I decided to \_\_\_\_\_ .

Remember, just use these as **guidelines**. You don't want to make it sound like a speech you memorized.

- Practice telling the same "story" using different words, so you won't come off as rehearsed and so you can change it on the fly, match the interviewer's values or the situation as you see it at the time.

## Questions About Me

- Tell me about yourself. (suggested focusing on pharmacy, dont get too personal- take personal & social life out of it → pharmacy schedule curriculum & why you decided to do pharmacy and a residency is what they really want to know)
- How did your interest in pharmacy begin?
- What are your strengths? What are your positive qualities and shortcomings? What are your weaknesses? Do you have a plan to correct/overcome your shortcomings?
  - Strengths
  - Weaknesses
- What do you think makes you the best qualified for this position? Why you over an equally qualified applicant? What qualifications make you a strong candidate? What qualities do you have that would make you a good resident? What specific skills do you have that set you apart from other applicants? We have a lot of strong applicants, what are a couple traits about you that you want us to remember about you and stand out about you?
- How can you contribute to this organization? What contributions do you add to the program (ie enthusiasm, passion, leadership)
- How would you characterize your work ethic?
- How do you handle criticism?
- What makes you angry?
- What do you worry about?
- What do you do in your free time?
- What was the last book you read for pleasure? Tell me about it.
- If I were to ask preceptor X to describe you, what would he or she say? What would a preceptor say about you?
- If you had to describe your personality in 3 words, what would they be?
- How do you handle stress?
- How do you handle change? (common question)
- How much direction do you need/prefer?
- Do you prefer group or individual projects? If you need to complete a project, do you prefer to work alone or with others and why?
- Given the choice, would you prefer to lead a group to achieve a specific goal or be assigned specific tasks to accomplish a goal? Why?
- Teams tend to have individuals with various roles – what role do you find you assume the most and why? (You may need to lead – ie, leader, facilitator, worker, etc.)
- What components or traits do you feel are necessary for a team to be most effective?
- If you get \$0.01, \$1, \$100, \$10,000, \$1,000,000 how would you spend it? –
  - \$0.01:
  - \$1:
  - \$100:
  - \$10,000:
  - \$1,000,000:
- What is something your family says about you that isn't true?
- How do you feel now that you know that you only have 5 questions and how much time did you reserve for it? (Was part of a survey)

- Tell us something unique about yourself that nobody knows
- How do you handle different types of personalities?
- What is your cooking specialty?
- What would your colleagues say about you?
- Describe your time-management skills.
- Describe a leadership role that you had.
- Tell me about any leadership roles you have had during the last few years.
- How do you define being a leader?
- If I were to ask your peers to comment about your leadership style, your leadership strengths, and your leadership weaknesses, how would they respond? What would this discussion tell me about you as a leader?
- Can you describe one challenging life experience that you had to overcome?
- Did you work as an intern during pharmacy school? If so, what type of training exposure (i.e., retail, hospital, research) did you get?
- When it comes to the structure of your typical work day, what learning environment do you find is the most effective for you?
- What do you believe it takes to have a successful career?
- How do you motivate people?
- Tell me about your most significant accomplishment.
- What steps do you take to build an understanding and show empathy with your patients?
- Tell me about another healthcare provider (non-pharmacist) that has positively influenced your professional development.



## Residency Related Questions

- Why do you want to work for us?
- Tell me what you know about our hospital and what interested you in applying here at [...].
- What do you think about our mission statement?
- How would you do... ? (keep in mind their mission statement as you answer questions)
- Why do you want to do a residency? What do you expect to gain from a pharmacy residency?
- Why did you apply to our residency program? (There's a lot of different programs, how did you decide on ours?)
  - What qualities are you looking for in a residency program?
    - Mission statement?
    - Varies from program to program... the characteristics about that you really like
      - Supportive environment
- What do you plan to do after your residency?
- Why did you attend pharmacy school?
- Why did you pick your particular pharmacy school?
- Do you have any specific areas of interest?
- What is your definition of pharmaceutical care?
- What is your philosophy of patient care? (stumped some ppl)
- What is your definition of a clinical pharmacist? What does the term "Clinical Pharmacist" mean to you?
- How do you define clinical pharmacy?
- What are your overall career goals?
- What do you see yourself doing in 5 years? 10 years? What do you see yourself doing in pharmacy in 10-15 years?
  - 5 years:
  - 10 years:
  - 10-15 years:
- How will this program help you achieve your long-term goals? What aspects of our program coincide with your long term career goals?
- What other residencies have you applied to? Have you interviewed at any other residency programs?
- What do you anticipate a typical day for a resident to be like?
- What are your expectations of spending time with your rotation preceptor to be like?
- What level of autonomy do you expect during your residency?
- Outside of completing a pharmacy practice residency, what other steps do you feel you need to take to meet your career goals?
- You are in your third month of residency. Currently you are on a busy rotation and your preceptor is clearly being pulled in many directions. You feel, however, that you are not receiving the guidance you desire. How do you handle the situation?
- If you could design your ideal residency what would it look like?
- What 3 things would you do on your first day at a residency?
- Who is the most influential person who affected your decision to do pharmacy?
- If you could be a drug, what would you be?

- If you were stranded on an island, what 3 drugs would you want to have with you and why?
- If you could make any drug, what would it do and what would you call it?
- If you don't match with a program, what would you do next year?
- What journals do you routinely read? What was the last great article you read? Who was the author?
- What contributions can you make to our program?
- Describe a mentor.
  - One who WANTS to teach
  - One who advises based on their knowledge
- What qualities are you looking for in a preceptor?
- How do you think you'll be able to balance all of the requirements of the residency?
- Describe a clinical intervention that you have made.
- What practice areas are you interested in?
- How much hospital/retail experience have you had?
- Describe or discuss the most interesting medical journal article you have recently read.
- How do you see the profession of pharmacy evolving over the next 10 years?
- What are the most significant trends affecting pharmacy?
- What is one of the major issues facing pharmacy today?
- While residency is a busy year, we believe everyone should have a life outside of pharmacy. How do you approach work from the standpoint of balancing career with personal life?
- If you could do anything different in your education, what would you do? Why?
- What has been your favorite clinical rotation? Why? What did you like most about your favorite clerkship rotation? What was your least favorite rotation? Why?
  - Favorite:
  - Least:
- What types of research have you been involved in? How did you manage balancing school and your research responsibilities?
- How do you see yourself fitting into the advancement of the profession?
- How does your degree prepare you to excel as a pharmacist and have a successful career?
- How do you feel that your education has prepared you for residency? Do you feel your education thus far have prepared you to succeed in a residency? If not, what could be changed or enhanced?
- How do you envision keeping current and informed once you are established in your career?
- What accomplishments would you like to achieve by the end of your residency year?
- What do you feel is the most effective form of communication (written, oral, both, etc) to provide drug information to a group of healthcare providers? Why?

## Situational Questions

Sometimes (maybe often) you won't be able to think of a situation that is work-related. But you can think of other kinds of situations (school or volunteer, for example) in which the behavior being asked about was called into play. You may never have had to "fire a friend," but did you have to confront a non-contributing team member on behalf of the rest of your study group? When you were president of a student organization, did you ever name someone the chairperson of a project, delegate responsibility to that person, and hold him/her accountable? Think about the skills and experiences being asked about regardless of the setting.

You won't be able to prepare for every question. Take time to think before you respond and, if you don't understand what is being asked, ask the interviewer to restate the question

- Describe your most memorable experiences from clerkship rotations. Can you describe your most memorable or satisfying patient case? What made it so meaningful?
- Tell me about a unique patient interaction that stands out for you. What made it memorable?
- What's the worst thing you did and got away with?
- Tell me about the best/most favorite teacher/preceptor you've ever had. Why? Tell me about your most influential or inspiring instructor and the personal attributes that set this person apart from others.
- Tell me about the worst teacher you've ever had. If you look back, is there anything you might have done to change that bad experience?
  - Teacher:
  - Preceptor:
- You work at a hospital as a pharmacist that serves pediatric and adult patients. There's a shortage of docitaxel, and you have 2 wk supply and won't have any in for 6 months, what do you plan to do with it?
- Tell me about a recent situation in which you had to deal with a very upset customer or co-worker.
- How would you deal with an irate customer?
- Describe a situation in which you were able to use persuasion to successfully move someone to your point of view
- Give me a specific example of a time when you used good judgment and logic in solving a problem. Give me an example of a time when you used your fact-finding skills to solve a problem.
- Give me an example of a time when you set a goal and were able to meet or achieve it.
- Give me a specific example of a time when you had to conform to a policy with which you did not agree.
- Tell me about a time when you had to go above and beyond the call of duty in order to get a job done.
- Tell me about a time when you had too many things to do and you were required to prioritize your tasks.
- Give me an example of a time when you had to make a split second decision.
- Tell me about a time you were able to successfully deal with another person even when that individual may not have personally liked you (or vice versa).
- Tell me about a difficult decision you've made in the last year.
- Give me an example of a time when something you tried to accomplish and failed.
- Give me an example of when you showed initiative and took the lead.
- Give me an example of a time when you motivated others.
- Tell me about a time when you delegated a project effectively.
- Tell me about a time when you missed an obvious solution to a problem.

- Describe a time when you anticipated potential problems and developed preventive measures.
- Tell me about a time when you were forced to make an unpopular decision.
- Please tell me about a time you had to fire a friend.
- Describe a time when you set your sights too high (or too low).
- Describe a time when you were faced with a stressful situation and how you coped with the problem.
- Give me an example of your typical way of dealing with conflict.
- Describe a conflict with a coworker and how resolved?
- Tell me about a time when you faced a conflict. How did you handle it? Would you do it differently if given the chance?
- Tell us about a time you worked with a team to accomplish a goal. Describe the process and the outcome.
- Tell us about a difficult situation and how you dealt with it
- Tell us about a time you had to work through a recommendation with a physician (aka a time you made a recommendation and what happened)
- Tell me about a time you were asked a clinical question that you did not know the answer to. How did you handle the situation?
- You are educating a patient on a brand new medication and have only 15 minutes before you have to run to a meeting. How would you deal with the patient if he/she has a lot of questions for you?
- You are a resident staffing the weekend. You notice a serious error in an order that was entered earlier that day by one of your fellow residents. You are good friends with this resident and he/she has confided in you that they are having a tough time managing time and preceptors, and staff pharmacists are beginning to notice his/her struggles. In addition to correcting the order, how would you handle this situation?
- Organizations are continually improving policies and procedures to incorporate feedback and also meet departmental needs. Tell me about a time when you've had to adjust to a situation that wasn't what you expected. How did you deal with it? What made the situation difficult? What could have made it easier?
- Tell me about the things that happen in the work environment that cause you the greatest frustration. How do you handle these?
- Tell about a time you took the initiative to promote diversity?
- Talk about challenges/programs you are proud of. Challenge faced in school?
- There was a class on your transcript that you didn't do as well in... can you talk about that session?
- Describe a situation in which you found that your team's results were not up to your professor's or supervisor's expectations. What happened? What action did you take?
- Tell me about a time you worked in a team & they weren't pulling their weight. Describe a time when you worked with a team where a peer was not completing their share of the work. How did you handle the situation?
- Give me an example of a time that required you to use your leadership skills in a way that was challenging.
- Describe a situation in which the leadership demonstrated could have been better. How, as a leader, would you have handled that situation differently?
- Tell me about a project that you handled well and one in which you were not successful. What did you learn from each one?
- Tell me about a time when you had competing priorities. How did you approach the situation, and what was the final outcome?
- Describe a time when you had to overcome an obstacle in a creative manner.
- Describe an experience where you were able to teach someone something new.

- Here's a scenario we would like you to consider: You are the only pharmacist in the pharmacy. On the phone is a nurse wanting to know dosing for a dopamine drip for a patient who is crashing. At the window is a doctor who is ranting and raving about an enoxaparin order that wasn't approved. On the other line is a nurse calling about a patient with a vancomycin level of 15. In what order do you handle these problems?
- Describe a time you had to motivate yourself to do something you didn't want to do.
- At one time or another, all of us are misunderstood by others. Give me an example of a time when this has happened to you. How did you respond?
- Give an example of when you were able to successfully apply information technology in order to identify a solution to a clinical question or problem.
- Are there choices you are making now in order to accommodate for the changes you anticipate in our profession? Please give an example.
- Tell me about your most successful presentation. Who was the audience? What made it so successful?
- Tell me about a time when you disagreed with a decision by your boss, preceptor, co-worker. Why did you disagree? What did you do about it?
- Describe a situation where you had to arrive at a compromise or guide others to a compromise.
- Describe a situation in which you experienced exemplary leadership being demonstrated. What did you learn from that situation?
- We all have downtime in our jobs. Tell me about a downtime at work or during a rotation, why you had it, and what you did with that time.
- Describe a situation where you were forced to make a quick decision. In hindsight, would you have made the same decision? If not, how would it be different now?
- Tell me about a time when you created agreement and shared purpose from a situation in which all parties originally differed in opinion, approach, and objectives.
- Describe a negative experience you have had with either a co-worker or a patient. How did you handle the situation? What was the outcome?
- Give an example of when you were able to make an impactful contribution to a team, committee, or group.
- Describe a time where you anticipated potential problems in a patient's medication plan and were able to make appropriate interventions.
- Tell me about a time where you showed initiative and took the lead on a project.
- Give me an example of a time when you were able to successfully communicate with someone despite difficult circumstances.
- Sometimes we can identify a small problem and address it before it becomes a much bigger problem. Can you provide an example of how you have done this?
- Tell me about a situation where patient care was impacted (either positively or negatively) by a team's ability to work together.
- Have you ever had a major conflict with a doctor/patient? If so, how did you handle it?
  - Doctor:
  - Patient:
- Describe the most significant contribution you made to patient's care this past year.

## Clinical Questions

You won't be able to prepare for every question. Take time to think before you respond and, if you don't understand what is being asked, ask the interviewer to restate the question

Some clinical questions/areas/etc.:

- A case about an elderly woman with COPD/asthma and pneumonia (what would you give her?, how would you treat her?, what bugs would you worry about?, etc)
- A case about opioid use in cancer pain (pt is concerned about addiction, discuss the case)
- A case about anti-coag (10mg warfarin to a frail elderly woman on amiodarone).
- One resident also told me (Vi) she had gotten a question where they handed her a list of medications the patient was on in the hospital and she had to tell them what was wrong with it. (this would be kind of hard to "study" for, but be aware you may get one like this)
- Tell me everything you know about heart failure.
- What would you do if you received an order for 0.45% HCl IV? Some will ask you left field questions to see how you act under pressure.

## Questions to Ask

### Residency Director

- What have residents brought to you that they want to change? And what did you do about it?
- Last time ASHP came what did they say you needed to change?
- How long is your accreditation good for? (the longer they are accredited for the better ASHP thinks their program is)
- How is your pharmacy department set up? Are there “levels” of pharmacists? Is the pharmacy decentralized?
- How is the rotation schedule set-up/assigned? What if a resident wants to change rotations half way through?
- What is the staffing model? All ops staffing or is there some clinical staffing?
- How are residency projects chosen/assigned? (is there a list to choose from? do the residents make them up themselves?)
- What do you feel are the strengths/weaknesses of your program?
- What do you like the most about working here?
- What did the previous resident do after they completed their residency?
- What do you think is the main challenge this hospital is going to face over the next year?
- What new services/changes/innovations are you planning to implement over the next year?
- How are patient charts kept? Are things electronic or are they still in physical charts? What about physician orders? Are they in an entry system or are they done by hand?
- What do you look for in a candidate?
- What do you feel is a unique quality about your program?
- Why did you decide to start a residency program?
- If you could change one thing about your program, what would it be?
- Patient population?
- What has been your most challenging experience thusfar and why?
- Weekly resident meetings?
- Project support? Official training sessions to prepare you?
- What makes your residency unique?
- What do you look for in a candidate?
- What do you feel is a unique quality about your program?
- Why did you decide to start a residency program?
- Why did you become a residency director?
- How does one become a preceptor
- Where do you see your residency in 5 years
- What changes would you make to your program if there were no restrictions
- What happened to the previous residents? Where are they now
- Describe some of the institutional and departmental changes that have occurred.
- What were the 3 most significant accomplishments last year?
- What steps are being taken to free up pharmacy time? Very important for potential resident or pharmacist.
- 

### Residents

- Do you feel like you could go work anywhere and be a competent pharmacist?
- Is the program receptive to your feedback?
- What has been your favorite rotation so far?
- Would you consider the same program if applying again?

- Are you from [city residency program is in]? If not... How do you like the area and have you had a chance to experience the city with your schedule?
- Once you got your rotation schedule, were you happy with it? Were you able to get (for the most part) the rotations that interested you most?
- What do you enjoy most about your residency program?
- How would you improve your program?
- Do you feel you have a good supportive system? How do you deal with stress of the residency program?
- What advice would you give a potential applicant of this program?
- What has been your most challenging experience thusfar and why?
- What 3 words would you use to describe your program?
- 

### Preceptors

- Why are you precepting? (do they like to teach? do they get extra pay? does the hospital make them?)
- How receptive are the practitioners at the institution to pharmacy's recommendations?
- What did you do if a resident didn't get a job done or wasn't meeting your expectations
- Preceptor time commitment?
- How do you define the success of a resident?
- For an individual interview: what role do professional organizations have in your career and what time, flexibility or encouragement do you give your residents who are interested in organizations
- Where do you see your residency in 5 years
- What specific responsibilities/rotations do I have?
- What are the most important qualities for a successful candidate to have? **ASK EARLY**
- How will you measure my performance?
- What are your goals and interests?
- 

### For Retail Positions

- What is a typical day like?
- How many pharmacy techs will be working with me?
- What other non-pharmacy responsibilities are involved with this position?
- How often will I be working alone?
- What is the policy for working on holidays?
- What are the actual shifts I could work?



## Thank-You Letter

- Acknowledge interview and date
- Express enthusiasm
- Highlight why you would be good for the position
- Address unresolved points if needed
- Reiterate interest in position
- Follow-up promptly!! Within 24 hours preferred!!
- Gather contact information from interviewer
  - Business cards
  - Write each interviewer individually if really interested in position
- Be genuine and sincere
- Include at least 1 positive aspect about the program/position
- Avoid making statements you don't firmly believe in
- Keep it short - Limit to one page
- The 4-R Thank-You Letter
  - Within a short period after the interview (48 hours), you should prepare and mail a thank-you letter to the interviewer. This letter can be a powerful tool if used properly.
  - Think of it as the 4-R letter: Remember, Reinforce, Recoup, Remind.
    - REMEMBER: The rush and speed of modern day business have caused many people to forego the courtesy of writing and sending thank-you letters. The fact that you write one will make you stand out from others and will help the interviewer to remember you. Make sure you collect business cards of key individuals you would like thank-you letters to go to, so you know their correct title & address.
    - REINFORCE: Review your evaluation of the interview and choose the parts of your skill/achievement/experience stories that aroused the most interest. Then recount a story that reinforces your value.
    - RECOUP: There is almost always something we forget to say or wish we had said better. This is the opportunity to recoup our losses. By preparing an earlier response, or creating an answer with clearer perspective, the thank-you letter can strengthen the interviewer's impression of you.
    - REMIND: People make promises with the best of intentions, but sometimes forget. The closing paragraph of the thank-you letter is a gracious way to remind the interviewer of a promise (i.e. "Thank you again for your interest and encouragement. I look forward to hearing from you next Thursday to learn the date of my next interview.")
  - Example THANK-YOU LETTER:

IMA P. STUDENT Post Office Box 1111

Amarillo, TX 79106

15 February 2009

Roger Director, Pharm.D.

Chief, Pharmacy Department

University Medical Center

Building 10—R#119

Amarillo, TX 79106

Dear Dr. Director:

State the Reason for this Letter: I wish to thank you and your staff for all the courtesies extended to me during my interview last Friday...

Expression of Enthusiasm and Potential Contribution: Actually seeing your innovative hospital pharmacy practice reinforced my strong desire to become an integral member of your team. As my visit progressed, I realized from my conversations with both preceptors and current residents how well this program meets my career goals.

Closing Statement: Once again, thank you for such an informative visit. All my questions and concerns were addressed either by you or your colleagues. Now, I eagerly await the match results to determine if I am selected for your position. If you require any additional information from me, please do not hesitate to contact me. I look forward to working with you in the future.

Sincerely,

Ima P. Student, Pharm.D. Candidate

# Tips for writing pharmacy residency letters of intent

The most recent statistics on the 2018 ASHP Resident Match indicate that 5,560 applicants for postgraduate year 1 (PGY1) residency positions and 973 applicants for postgraduate year 2 (PGY2) residencies participated in the Match, competing for 4,452 positions (3,662 PGY1 and 790 PGY2 positions).<sup>1</sup> The statistics also reveal that 1,925 (35%) PGY1 candidates and 232 (24%) PGY2 candidates went unmatched in the 2018 cycle.<sup>1</sup> Because the number of pharmacy residency applicants outpaces the number of available positions, it is important for applicants to distinguish themselves. Students may work on a research project or serve as an organization officer to distinguish themselves from other candidates for these highly competitive residency positions, but students should also pay specific attention to compiling and completing the actual application itself. A pharmacy residency candidate's curriculum vitae and letter of intent are oftentimes the first items screened in a candidate review and offer the initial introductions to those reviewing the application. In a competitive environment where candidates may look very similar to each other on metrics such as grade point average, a student's letter of intent may undergo extreme scrutiny to narrow the applicant pool. Even small grammatical mistakes may determine which applicants are offered an interview. Hillebrand and colleagues<sup>2</sup> conducted a study evaluating residency program screening tools and revealed that residency program directors (RPDs) across the country felt that the letter of intent was as or more important than other factors, including leadership roles, grade point average, and involvement in research.<sup>2</sup> The study also noted that the letter of intent, along with leadership roles and extracurricular activities, can be used to distinguish between candidates when inviting applicants for interviews.<sup>2</sup> Therefore, a strong letter of intent is vital during the residency application process; unfortunately, the literature lacks guidelines for letters of intent. Students may be unaware of the importance of the letter of intent and unclear of what fundamental content should be included. The following recommendations are offered to define letters of intent for pharmacy residency applicants, and 4 suggested steps for writing an effective letter of intent are provided.

**Letters of intent definition.** Students may confuse letters of intent with cover letters. A cover letter is a formal business letter addressed to a company or business and is used by an applicant to explain why he or she is a qualified candidate for the position or employment opportunity.<sup>3</sup> In

comparison, a letter of intent is a combination of a formal business cover letter and a narrative essay. The cover letter portion conveys the applicant's interest in and qualifications for obtaining a pharmacy residency position at a particular program. It should include how the applicant's academic background prepared the applicant for the clinical, research, teaching, communication, and interpersonal demands of a residency, as well as career goals.<sup>3</sup> The narrative portion should emphasize the applicant's personal story including why the training opportunity (vs employment opportunity) is a good fit for him or her, how it will help the applicant develop professionally, and other compelling details.<sup>3</sup> Overall, although both a cover letter and letter of intent allow an applicant to communicate his or her qualifications and provide an example of the applicant's writing skills,<sup>4</sup> the letter of intent is best delivered as an engaging story that allows an applicant to distinguish himself or herself. This document is critically important to the residency application, especially because RPDs read many of these letters, which can sound very similar to each other if a good hook and story are absent.

**Engage in self-reflection.** Before starting to write a letter of intent, applicants should first engage in self-reflection to explore personal reasons as to why they want to complete a residency and what they want to achieve during the residency. The following self-reflection questions can help applicants gather background information they need to write their letter of intent:

- Why are you pursuing a pharmacy residency position?
- What are your professional interests (eg, oncology, ambulatory care, emergency medicine)?
- What are your short-term goals?
- What are your long-term goals?
- How will this specific residency help you with your future plans?
- What pharmacy school experiences (eg, patient care, clinical, interprofessional, leadership, service, research, problem solving, educator and/or teaching) have prepared you for residency?
- Where do you want to live and why (eg, geographic region, city, suburban, rural; to find programs in a preferred area)?
- What type of program are you interested in and why (eg, university-affiliated, hospital-based, teaching-certificate availability, 2-year program, potential to further specialize, number of coresidents)?

Reflecting on these questions can start at any point during the doctor of pharmacy program but should progress with periodic reevaluation, such as at the end of each semester or professional year. Applicants should also reflect on these

*The Pharmacy Student Forum column features articles that address the unique needs of students throughout school as they transition into new practitioners. Authors include students and others with expertise in a topic of interest to students. AJHP readers are invited to submit topics or articles for this column to the Pharmacy Student Forum, c/o Diana Dabdub, 4500 East-West Highway, Suite 900, Bethesda, MD 20814 (301-664-8854 or [students@ashp.org](mailto:students@ashp.org)).*

questions after every advanced pharmacy practice experience because the experiences can offer increased insight about strengths and interest areas. This reflection will allow for more intentional evaluation of what residency programs have to offer and the overall alignment with identified goals and interest areas.

**Research programs.** After engaging in self-reflection about residency goals and interests, applicants should begin researching programs to find ones that may be a good fit. One approach is to search the ASHP residency website,<sup>5</sup> which contains information related to general residency information, the application process, the National Matching Program, Pharmacy Online Residency Centralized Application Service (PhORCAS), regional residency conferences, and residency blogs, newsletters, and webinars. The website also offers a searchable online residency directory where applicants can narrow their search by institution, location, or program type. The website offers “one-stop shopping” for applicants to answer many of the questions they may have. Applicants may also want to consider interviewing faculty at their own college so they can learn where the faculty completed their residencies and to ask more specific residency questions that the ASHP website may not answer.<sup>5</sup> Interviewing faculty can be an overlooked research option. This approach can be especially helpful if an applicant is interested in a specialty area and specifically meets with a faculty member practicing in that area. Faculty can explain what their program was like, program requirements, strengths, and key contact people. They can also offer key advice and insights for obtaining a residency that may not have occurred to an applicant. Some colleges or schools of pharmacy list on their websites where their faculty attended residency in a table format or in a faculty directory to help applicants identify which faculty to meet with. Similarly, applicants may also want to meet with current residents at their school or college or local residents on their rotations. Current residents can be a rich resource given their recent experience with the residency search process and residency life in general. Another approach applicants can take is to attend the ASHP Midyear Residency Showcase and/or state-level residency showcases. Attending these events allows applicants to meet program faculty and residents, assess initial levels of comfort and fit with the residency program and people, and ask specific questions about the program that are not answered on the program website. It is a great opportunity to find out what program directors are looking for in an applicant and perceived areas of program strength. Overall, the information gained from these research approaches, as well as other research strategies, can be used to personalize the letter of intent.

**Letter format, structure, and style recommendations.** Once applicants have completed their self-reflection and residency program research, it is time to start preparing the application, including writing the letter of intent. The following recommendations are offered to help applicants get started and include details that programs expect to be

included, while personalizing the letter so it is unique and memorable.

Overall, the letter of intent should be formatted as a standard business letter. As indicated on the PhORCAS website, the letter should be between 1 and 2 pages in length with 1-inch margins.<sup>6</sup> The PhORCAS website also encourages applicants to use a standard business letter style, which would include using a formal font (eg, Arial, Times New Roman, Calibri) with an 11–12 point font size.<sup>6</sup> A standard business letter begins at the top left of the page by listing the applicant's name and current mailing address followed by the date and a line space. Then the RPD's name, credentials, and mailing address should be listed. The applicant should then include a formal salutation such as “Dear Dr. Medina:”. The overall format recommendations may seem obvious, but a complacent approach can get applicants in trouble. For example, it is likely that an applicant would reuse the same letter, albeit with edits and tailoring, for multiple programs. However, applicants may not properly update the RPD's name or address, therefore calling the RPD by the wrong name or using the wrong address. This mistake can offend the RPD or reveal that the applicant does not have good attention to detail, both of which are unintentional but can result in programs discounting the applicant. In a competitive environment, careless and avoidable mistakes can be costly.

When applicants start the body of the letter, there are specific items to discuss. These items have been grouped together into sections, but do not need to be addressed in the order that is listed. The ultimate goal of the body of the letter is for applicants to authentically express their interest and goals in an engaging and memorable fashion vs writing a generic letter that could be applied to any program. Applicants are encouraged to “show” not “tell” by including concise, specific, and vivid personal examples demonstrating the message they are trying to convey to the program. In the body of the letter of intent, one section should be focused on what the applicant wants to gain from completing a specific residency. Applicants should explain how they learned about the program, why they are interested in that specific program (such as unique attributes or experiences), why they think the program is a good fit, any special connections they have to the program (eg, internships, rotation, alumni mentor, RPD interactions), and how the program will help them address their interests and achieve their career goal(s).<sup>4,6,7</sup> Specifically, applicants should emphasize their specific clinical areas of interest and that the program meets those interests. If an applicant emphasizes a clinical practice area of interest, but the program does not offer a clinical rotation in that practice area, then the program may dismiss the applicant because of a lack of fit. The recommendations on PhORCAS<sup>6</sup> indicate that applicants should address these questions as well as other program-specific questions that may be asked. With some effort, applicants can tailor their letter to a specific program, create a letter that would be of interest to the reviewer, and demonstrate that they researched the program

well. Overall, this section should be engaging and personalized and serve to entice the reviewer to continue reading.

Another section of the letter should focus on what the applicant offers to the program by explicitly addressing how he or she is a good fit for the residency program and what qualifications and/or values the applicant brings to the program. Applicants should include any relevant experiences and/or accomplishments that will help them excel in the program such as research, teaching, leadership, or clinical experience.<sup>7</sup> These explanations and examples should provide more pertinent details that extend above and beyond what is already provided in the rest of the application.<sup>4</sup> Similar to the previous section, this section should be compelling, unique, honest, and interesting. The letter should then end with a complimentary closing (eg, “Sincerely” or “Respectfully”) and a signature (signed and typed name).

Overall, in the body of the letter, applicants should be cognizant of and honest about their qualifications and career expectations because the ultimate goal is to obtain a residency that is a good fit for both the applicant and the program. Several professional organizations and residency programs provide letter-of-intent templates for prospective pharmacy residency applicants (see [Appendix](#)). It should be noted that these resources are helpful to frame the letter, but applicants should avoid using the exact framework or phrasing because other candidates are likely using the same resources.

**Remember to proofread.** The last and most overlooked step is to meticulously proofread the letter along with using spelling and grammar check. To help achieve a perfect letter, applicants should consider asking other individuals (eg, faculty, mentor, friends, family, university writing center staff) to review the letter for specific grammar and spelling errors, clarity of thought, engagement, quality of presenting self, and other general feedback. Furthermore, the applicant should check to ensure that the recipient’s name and institution are spelled correctly. As mentioned previously, minor grammar mistakes may be magnified in a competitive process.

**Summary.** The importance of the letter of intent in a pharmacy residency application cannot be diminished, because it can be the difference between receiving an interview invitation or a rejection letter. A well-constructed letter is engaging, personalized, and authentic and demonstrates an applicant’s effective communication skills, realistic career goals, genuine program interest, personal background (eg, experience, skills, qualifications), and the value he or she can add to the program. Although writing a letter of intent may seem to be a daunting process, adhering to these suggestions will hopefully lead to an on-site interview, a Match Day match, and ultimately, a successful residency year.

1. American Society of Health-System Pharmacists 2018 Match statistics. <https://natmatch.com/ashprmp/stats.html>. Accessed November 12, 2018.
2. Hillebrand K, Leinum CJ, Desai S, Pettit NN, Fuller PD. Residency application screening tools: a survey of academic medical centers. *Am J Health-Syst Pharm*. 2015;72(11):S16-S19.
3. University of San Francisco Office of Career and Professional Development. Writing a letter of intent for a pharmacy residency program (2013). <https://career.ucsf.edu/sites/career.ucsf.edu/files/PDF/PharmacyResidencyWritingALetterOfIntent.pdf>. Accessed November 12, 2018.
4. Ice CJ. Professional Pearl: writing a pharmacy letter of intent. <https://www.ashp.org/-/media/assets/new-practitioner/docs/writing-a-letter-of-intent.ashx?la=en&hash=B4C2E8ED26B80E6F6B9D8B7C5105C443284D0DBC>. Accessed November 12, 2018.
5. American Society of Health-System Pharmacists Residency Website. <https://www.ashp.org/Professional-Development/Residency-Information>. Accessed November 12, 2018.
6. PhORCAS website. [https://portal.phorcass.org/applicants2017/instruction/phorcass\\_letters.htm](https://portal.phorcass.org/applicants2017/instruction/phorcass_letters.htm). Accessed March 7, 2020.
7. Bright DR, Adams AJ, Ulbrich TR, Soric MM. Coaching for success: a residency search primer and update for preceptors and faculty. *Hosp Pharm*. 2015;50(6):467-476.

## Appendix—Sample Letters of Intent

<https://www.accp.com/docs/stunet/compass/LetterOfIntent.pdf>

[https://www.ichpnet.org/publications\\_resources/member\\_resources\\_and\\_toolkits/The\\_Letter\\_of\\_Intent.pdf](https://www.ichpnet.org/publications_resources/member_resources_and_toolkits/The_Letter_of_Intent.pdf)

<https://career.ucsf.edu/sites/career.ucsf.edu/files/PDF/PharmacyResidencyWritingALetterOfIntent.pdf>

<https://pharmacy.wisc.edu/wp-content/uploads/2016/05/propearls-writing-pharmacy-resletter.pdf>

### Melissa S. Medina, EdD

Department of Pharmacy: Clinical and Administrative Sciences  
University of Oklahoma College of Pharmacy  
Oklahoma City, OK  
[melissa-medina@ouhsc.edu](mailto:melissa-medina@ouhsc.edu)

### Anthy L. Tran, PharmD

University of Oklahoma College of Pharmacy  
Oklahoma City, OK

### Kajal Bhakta, PharmD

University of Oklahoma College of Pharmacy  
Oklahoma City, OK

### Robert A. Klatt, PharmD

University of Oklahoma College of Pharmacy  
Oklahoma City, OK

### Jamie L. Miller, PharmD

Department of Pharmacy: Clinical and Administrative Sciences  
University of Oklahoma College of Pharmacy  
Oklahoma City, OK

**Disclosures:** The authors have declared no potential conflicts of interest.

**Keywords:** interviews, professional development, residencies, writing

© American Society of Health-System Pharmacists 2020. All rights reserved. For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com).

DOI 10.1093/ajhp/zxaa026

## **Professional Pearl: Writing a Pharmacy Residency Letter of Intent**

By Calvin J. Ice, PharmD, BCPS, BCCCP

Writing a letter of intent is an essential part of most residency applications, and it's one of the most important tools you as the applicant can leverage to make yourself and your skill set stand out from the others. This article will discuss how letters of intent differ from cover letters and how residency applicants can prepare a well-written letter of intent.

### **Letter of Intent vs. Cover Letter**

The content of a letter of intent and cover letter may be similar, but each has a slightly different purpose. Elements of a cover letter may be incorporated into a letter of intent and vice versa. Since they are similar, you would never need to submit both a letter of intent and cover letter.

The purpose of a cover letter is to briefly introduce yourself, your qualifications, your interest in the position, and to ultimately direct the reviewer to attached documents such as a curriculum vitae or an application packet.

Similarly, a letter of intent captures the elements mentioned above, but it is typically more comprehensive. It's an opportunity to put your writing skills to good use to demonstrate to the prospective residency program director your drive, ambition, and career goals. It also gives you the opportunity to showcase and explain some of your unique professional experiences, leadership potential, and other skill sets that may not be fully explained in the other portions of your application.

### **Letter of Intent Set-up**

First and foremost, the letter of intent must be formatted appropriately and should be visually appealing. Even an exceptionally well-written letter of intent may find its way to the bottom of a review pile if it appears too cluttered.

Select a standard letter format as a model, and ensure your contact information is included clearly. Address the letter appropriately to the reviewer. For many residency programs, this will likely be the residency program director, but consider any special application instructions you receive from the program.

As with other professional documents, your letter of intent should have one-inch margins and font size 11 or 12. It's always important to review the program's application instructions to determine if there are any specific content or length requirements. In the absence of a long list of content requirements from the program, it is generally best to keep the letter of intent on a single page.

Always end your letter of intent with a signature. In the era of electronic submission of applications, it can be easily forgotten. Consider printing your final letter to sign and scan back to yourself, or keep a scanned copy of your signature on file to insert within the document.

## **Letter of Intent Content**

Remember that this letter serves as your venue to declare your application intentions to the program director. Use action-oriented wording and the active tense. Be direct, and be concise. Remember that residency programs are reviewing increasing numbers of applicants, so writing a more focused and logical letter will help to keep your reviewer engaged.

Whenever I write a letter of intent, I have three main questions in mind that I want to answer for my reader.

1. What about the residency program interests me?
  - Consider including how you learned about the program, unique attributes the program offers, and explicitly state why you are interested in this particular program.
2. How is this residency program a good fit for me?
  - Demonstrate why you want to do a residency, how this program will help you meet or progress toward your career goals (both short and long term), and how it will help you develop within your area(s) of interest.
3. How am I a good fit for the residency program?
  - Demonstrate your value to the program and to the institution by describing some of your skills, experiences, personality, etc. in more detail than the reviewer will find in the rest of your application.
  - Detail how your experiences and achievements have prepared you to be a successful pharmacy resident.
  - Personally, I think it's also important to tie in how you can contribute to the institution or department mission.

This does not necessarily mean that each question needs an exclusively designated paragraph. You can include multiple short paragraphs, and you can blend your information for each of these questions into related content. The key is to ensure your content is clear, logical, and not duplicative.

In your concluding statement, be sure to thank your reviewer for his/her time and invite him/her to contact you with any questions.

## **Other Letter of Intent Tips**

Although the letter of intent is certainly not a time you need to be modest, consider how many times you state “I, me, or my.” If it seems excessive, consider how you can rephrase to capture the same meaning while eliminating some of those pronouns.

Avoid the mistake of writing a generic letter of intent to send to multiple programs. Although you may want to copy & paste portions of the letter, each letter should be individual and tailored to the individual program to demonstrate why you are interested in that specific program. This also may help you prevent making a careless mistake of sending a letter addressed to one program to the wrong program.



In addition to the personal intent this letter conveys, it can also demonstrate to the reviewer whether you can communicate professionally and clearly. Avoiding grammatical errors is critical. Consider reading your letter out loud and requesting a colleague to review the letter to help catch any errors before submission. During your review, also look for opportunities to cut down on excessive words by stating information more simply.

### **Resources**

- *Get the Residency: ASHP's Guide to Residency Interviews and Preparation* by Joshua Caballero, Kevin Clauson, and Sandra Benavides
- *The Pharmacy Professional's Guide to Résumés, CVs, & Interviewing*, 3<sup>rd</sup> Edition by Thomas R Reinders
- PhORCAS – application instructions

Be sure to check out other career-related resources from the Pharmacy Student Forum and the New Practitioners Forum on the ASHP website!