The Northeast Ohio Medical University (NEOMED) College of Pharmacy experiential education program provides students with the opportunity to apply the knowledge and skill learned in the classroom setting to real-life situations. Under the facilitation of a preceptor, students complete a unique Introductory Pharmacy Practice Experiences (IPPEs) during the first three years of the professional program and Advanced Pharmacy Practice Experiences (APPEs) during the fourth year of the program. The program is committed to providing the student with the necessary hands-on training they need to succeed as a future practicing pharmacist.

First Year (P1) Introductory Pharmacy Practice Experience
The primary goal of the P1 IPPEs is for the student to gain exposure to a variety of practice settings and to begin the process of professional orientation to attitudes, values and behaviors expected in pharmacy practice. The objectives for these visits focus on the theme of “Dosage Forms”. Students will learn the scope of pharmacy services provided by the site, identify common pharmaceuticals and dosage forms dispensed, preparing products for dispensing, and understand the medication inventory management of the site. The P1 site visits take place during the winter and spring of the first year in the professional curriculum. Students visit each site once a week (4 hours in the afternoon) for 3 weeks. Each student will visit a total of five sites in practice settings to include: community chain, community independent, institutional, and two “other” settings.

Second Year (P2) Introductory Pharmacy Practice Experience
The goal of the P2 IPPEs is for the student to be exposed and gain experience in the process of filling and dispensing prescriptions. The objectives for these visits focus on the theme of “Medication Use Systems”. Students will actively participate in the prescription dispensing process, develop the skill to counsel patients on OTC products, and understand the challenges of providing medications to an underserved patient. The P2 site visits begin in the fall and extend throughout the entire second year of the professional curriculum. Students visit each site twice a week (2 x 4 hours in the morning) for 8 weeks. Each student will visit three practice settings to include: community, institutional, and an elective.

Third Year (P3) Introductory Pharmacy Practice Experience
The goal of the P3 visits is for the student to understand the processes and systems utilized to achieve appropriate medication outcomes in the patient. The objectives for these visits focus on the theme of “Patient Safety”. Students will participate in the procedures for monitoring medication safety, identify quality improvements of the medication use system, identify appropriate monitoring parameters for drug therapy, understand the legal and regulatory requirements of the site, and counsel patients on medications. Students will also be able to develop their skills in delivering an patient case presentation, leading a journal club, answering drug information questions, and completing a project. Similar to the P2 visits, P3 students visit each site twice a week (2 x 4 hours in the afternoon) for 8 weeks. They will visit three practice settings to include: community, institutional, and an elective.

Fourth Year (P4) Advanced Pharmacy Practice Experience
Beginning in the summer of the fourth year students complete 10 months of APPEs. The theme of these rotations is “Patient Centered Care”. Students build upon the information and training acquired in his/her didactic and experiential education and apply these skills in direct patient care activities. The monthly rotations include:
- Ambulatory care (2 months)
- Inpatient / Acute Care General Medicine (2 months)
- Community Pharmacy
- Hospital / Health-System Pharmacy
- Selective Leadership (with either of the above)
- Selective (Pediatric or Geriatric Medicine)
- Underserved
- Elective

If you are interested in learning more about the program or would like to become a pharmacy preceptor for NEOMED please contact Scott Wisneski, Pharm.D., M.B.A., Director, Experiential Education at 330-325-6220 or visit our website at: http://www.neomed.edu/academics/pharmacy/departments-1/pharmacy-practice/preceptor-information-1
First Year (P1) IPPE Training Goals and Objectives

Goal #1: **Understand the scope of pharmacy services provided**
Description: One of the primary goals of the first year IPPE site visits is for the student to gain exposure to a variety of practice settings and to begin the process of professional orientation to attitudes, values and behaviors expected in pharmacy practice.
Objective(s)
1. The student will complete a site profile questionnaire with guidance from the preceptor or the preceptor's designee which describes the nature of pharmacy practice at the site and services provided. This activity should not exceed a total of 60 minutes of on-site time.

Goal #2: **Identify pharmaceuticals commonly utilized/dispensed at the site**
Description: This activity is designed to reinforce the students’ knowledge of the most widely prescribed drug list they’ve been learning in the classroom. The student should be able to identify the pharmaceutical products most frequently utilized at the site, with the ultimate ability to compare this to other pharmacy practice environments.
Objective(s)
1. The student will identify the top ten utilized pharmaceuticals (by volume, cost or both) in stock at this site. The student will determine which of these products are in common with the most widely prescribed drug list assigned in the classroom.
2. The student will observe, assist or perform the task of correctly placing medications into appropriate storage locations.

Goal #3: **Understand pharmaceutical packaging needs and requirements at the site, and how the product is prepared for dispensing.**
Description: This goal is intended to expose the student to the many facets of pharmaceutical packaging (manufacturer and repackaging) including labeling, expiration dating, storage conditions, lot numbering, handling, container selection, stability vs. sterility, etc. This goal is also intended to allow the student to participate in as much pharmaceutical compounding (i.e. suspensions, creams, mouthwashes, sterile IV preparation, ophthalmic, etc.) as appropriate for the specific practice site.
Objective(s)
The student is to perform as many of the following activities as possible and appropriate for the practice site:
1. Review assigned (by preceptor) inventory of pharmaceuticals for expiration status, and remove/identify expired or soon-to-expire products according to the direction of the preceptor. This activity should not exceed a total of 2 hours of on-site time.
2. Confirm that the storage conditions are appropriate for 10 pharmaceutical products representing 10 different dosage forms.
3. Identify and review the presence of bar-coding on drug packaging (manufacturer and/or repackaged) and all uses for this bar-coding at the practice site.
4. Participate in the repackaging of drug products (including calculations and documentation) as typically performed at the site (if applicable) and at the discretion of the preceptor.
5. Document the expiration dating policy for repackaged items at the site.
6. Participate in the compounding of pharmaceuticals in preparation for dispensing (if applicable).

Goal #4: **Understand availability of various dosage forms and their purpose**
Description: This goal is in keeping with the curriculum P1 theme “Dosage Forms.” Through an understanding of the many available drug product dosage forms, students will ultimately be able to associate these dosage forms with indication and therapeutic goals. Types of activities may include: measuring/selecting the correct dose/volume, evaluating benefits of different dosage forms of the same pharmaceutical, compounding of alternative dosage forms (i.e., suspensions, solutions), etc.
Objective(s)
1. Identify the pharmaceutical product at the site which is available in the greatest number of available dosage forms. Review each dosage form and suggest under which circumstances it would be the preferred therapeutic choice.
Goal #5: **Understand basic pharmaceutical distribution methods**

Description: The purpose of this goal is to provide the student with an understanding of the various dispensing/distribution methods (i.e., automation, centralized, decentralized, automated dispensing devices, etc.) and their purpose. These include the processes used within the pharmacy for preparation of the dispensable product and design of the end-product itself (e.g., prescription vial, multiple day blister packaging, unit-dose, etc.).

**Objective(s)**
1. Observe or participate (at preceptor discretion) in the preparation of pharmaceuticals for dispensing (e.g., selecting and counting tablets, filling of automated/robotic devices, filling of automated dispensing cabinets, etc.)
2. Observe or participate in the selection, preparation and/or organization of drug products for verification/checking by a pharmacist.

Goal #6: **Understand pharmaceutical inventory management**

Description: The purpose of this goal is to provide the student with an understanding of the process of procurement of pharmaceuticals. This is to include: source, ordering (method and frequency), receiving, invoicing, returns, handling of expired products, recalls, etc.

**Objective(s)**
1. Observe, participate in or review the order preparation process used at the site.
2. Observe, participate in or review the order receipt and stocking process at the site.
Second Year (P2) IPPE Training Goals and Objectives

**Goal #1: Understand the method(s) and process of dispensing medication to patients**

Description: During the second year IPPE site visits the student should gain exposure to the various methods and processes used to dispense medication(s) to a patient.

Objectives:

1. The student should understand the medication distribution/dispensing process utilized at the site. This should include but not limited to receiving the medication order, processing the order, filling the order, checking the order, and dispensing to the patient.
2. The student should be able to recognize and utilize the various technology (computer systems, automated dispensing devices, bar-coding, robotics) used in the medication distribution process.
3. The student should understand the federal, state, accrediting body, and site-specific regulations and standards for the dispensing of medications to a patient.
4. The student should be able to identify the programs, methods, technology utilized within the pharmacy to detect and minimize the occurrence of medication errors.

**Goal #2: Understand and demonstrate the prescription filling and dispensing process**

Description: The purpose of this goal is for the student to understand and participate in the processing, filling, and dispensing of prescription orders.

Objectives:

1. The student should recognize the legal types of prescription orders (written, verbal, faxed, electronic, physician order entry).
2. The student should be able to obtain important background information on the patient (allergies, medical history, medication history/reconciliation, insurance information) in order to process a prescription.
3. The student should participate in the data entry process for filling a prescription. This should include but not limited to entry of patient information, patient profile management, reading the prescription, clarification of the order with the prescriber when incomplete or erroneous information is detected, and billing of a third party payer.
4. The student should observe and participate in the proper selection/compounding of the proper medication, dosage form, and amount to fill the prescription order.
5. The student should be able to accurately perform any necessary pharmaceutical calculations to properly fill or dispense a prescription.
6. The student should participate in prescription labeling, including selection and utilization of any appropriate auxiliary labeling.
7. The student should observe the procedure(s) utilized in checking a medication (oral, injectable, chemotherapy, floor stock, emergency supplies, etc.) prior to dispensing.
8. The student should observe and participate (at the preceptor discretion) in the education and counseling of patients on medications. This may include demonstrating to the patient how to use various dosage forms (inhalers, injectables, eye drops/ointments, nasal sprays, and topical preparations), medical devices, and home-monitoring instruments (glucometer, blood pressure, etc.).
9. The student should observe and participate in the proper administration of medications to a patient. This may include the administration of routine immunizations.

**Goal #3: Demonstrate the ability to counsel patients on the selection and use of OTC products**

Description: The purpose of this goal is for the student to utilize his/her knowledge in making recommendations to patients regarding the selection and use of OTC products to include dietary supplements, and herbal preparations. In addition, this goal provides an opportunity to develop and reinforce the student’s communication skills with patients.

Objectives:
1. The student should observe and participate in the counseling of patients on the need, appropriate selection, and use of OTC products. This should include assessing the source and severity of the patient’s symptoms, medical history, and determination if an OTC product will alleviate the symptoms.
2. The student should be able to educate and advise the patient to seek medical attention when an OTC product is not indicated.
3. The student should discuss the appropriate self medication techniques of the selected OTC medication(s) to the patient.
4. The student shall be able to instruct the patient on the expected outcomes of using an OTC product and what to do if improvement does not occur.

**Goal #4: Understand the challenges and opportunities to providing medications to the underserved patient**

Description: The purpose of this goal is for the student to assist in the provision of medications to the underserved (un- or under-insured) patient.

Objectives:

1. The student should recognize the various programs to assist a patient to obtaining a needed medication. This may include but not limited to Medicare/Medicaid programs, prescription assistance programs, generic pharmacy formularies, and sample programs.
2. The student should assist a patient in applying for a specific prescription assistance program.
3. The student should participate in resolving third party disputes concerning prescription reimbursement.

**Goal #5: The student should recognize the role of various health care practitioners in the acquisition, distribution and administration of medications**

Description: The purpose of this goal is for the student to be able to recognize the role and responsibilities various health care providers have in the overall medication distribution process.

Objectives:

1. The student should recognize those individuals based on federal, state, or site specific regulations that can order and prescribe medications.
2. The student should understand the role of various personnel within a pharmacy or pharmacy department have in the medication distribution process. This may include but not limited to the pharmacist, pharmacy technician, director/manager, clinical pharmacist, buyer, etc.
3. The student should recognize the role that other health care practitioners (nurses, respiratory therapists, emergency technicians, etc.) have in the distribution and administration of medications.
**Third Year (P3) IPPE Training Goals and Objectives**

**Goal #1:** The student will demonstrate the ability to counsel patients on medications utilizing effective education techniques to include appropriate time and style for counseling, use of patient education materials, assessment of patient understanding, and documentation of educational activity.

**Objectives:**
1. Counsel on use, administration, potential side-effects, monitoring, and special storage requirements of a medication.
2. Counsel on the proper technique for administering various dosage forms to include inhalers, injectables, eye drops/ointments, topical patches, nasal sprays, topical creams/ointments/lotions, suppositories, and any others that are pertinent to the practice site.
3. Counsel on correct use of medical devices and home-monitoring instruments.
4. Identify modifiable risk factors (diet, lifestyle, etc.) and provide necessary information and education to reinforce adherence to non-pharmacologic treatments in addition to medications.
5. Distribute and explain patient MedGuides when appropriate.
6. Answer drug information questions that come from patients.

**Goal #2:** The student will participate in the process and procedures utilized by the site in monitoring medication safety

**Objectives:**
1. Identify, report, track, analyze adverse drug reactions, medication errors, and drug recalls.
2. Evaluate medication error reports to identify trends and opportunities to enhance patient safety.
3. Clarify prescription orders with a prescriber when incomplete or erroneous information is detected.
4. Identify the approved abbreviations and high alert medications utilized at the site.
5. Identify and utilize technology (i.e bar-coding, computerized physician order entry, electronic medication record, smart pumps) which enhances patient safety.
6. Participate in the medication reconciliation process utilized by the site.
7. Recognize and apply accreditation standards to ensure patient safety (i.e. The Joint Commission Patient Safety Goals, NCQA).
8. Explain strategies used by the site to analyze and prevent future system failures (i.e FMEA - failure mode effects analysis).

**Goal #3:** The student will participate in the performance improvement of the medication use system to include prescribing, transcription, dispensing, administration, and monitoring.

**Objectives:**
1. Critique the necessary steps in processing a prescription for patient use.
2. Recognize errors in data entry, misinterpretation of orders and the distribution of wrong drugs, doses, or dosage forms.
3. Identify look-alike and sound-alike drugs available at the site.
4. Evaluate production processes to ensure pharmaceutically safe and elegant medications are prepared for patients.
5. Review quality assurance records to ensure proper storage, handling, and maintenance of medications and devices.
6. Monitor compliance of sterile product preparation policies and procedures.
7. Review the process used in the provision of investigational drug services within a hospital pharmacy.

**Goal #4:** The student will identify the appropriate monitoring parameters for drug therapy.

**Objectives:**
1. Identify the components of a patient medical record or chart and gain an understanding of the value of each section.
2. Review patient’s medical record to identify disease states, social history, allergies, medication history, and other pertinent health and patient information.
3. Utilize patient history, physical assessment techniques, laboratory data and medication history to identify appropriate monitoring parameters for a patient’s drug therapy.
4. Utilize resources to monitor for medication adherence, assessing potential drug interactions, interpreting laboratory tests, and assessing medication side-effects.
5. Utilize the appropriate methods to assess patient’s response to drug therapy such as laboratory data, blood pressure readings, heart rate, extremity swelling/edema, skin changes, clinical signs and symptoms, etc.
6. Determine the most effective and safest dose and route of administration of a medication for a patient.

Goal #5: The student will participate in the process to ensure pharmacy compliance with legal, regulatory, safety, and accreditation requirements.

Objectives:
1. Review the policies and procedures utilized by a pharmacy to maintain compliance with the legal, regulatory, safety, and accreditation requirements.
2. Review the federal and state pharmacy laws.
3. Review the prescribing guidelines for various health care practitioners (i.e. Physician Assistants, Nurse practitioners, Optometrists, etc)
4. Participate in controlled substance record keeping including utilization of the Ohio Automated Rx Reporting System (OARRS), detecting drug diversion, and reporting theft.
5. Review policies and procedures regarding medications with special prescribing and dispensing requirements (i.e. pseudoephedrine, clozapine, isotretinoin, buprenorphine, tikosyn, etc.).
6. Review the utilization and regulations associated with the electronic prescribing (E-prescribing) of medications.
7. Review the appropriate accreditation standards for the site (i.e. Joint Commission Accreditation Standards for Healthcare Organizations, NCQA, others).
8. Review the certification, competency, and training standards for personnel within the pharmacy.

Goal #6: The student will prepare and deliver a presentation (i.e. patient case, journal club, drug information question) using the format described to the student in the didactic PPCE course, to personnel at the practice site.

Objectives:
1. If possible the preceptor will assist the student in the identification of a topic and/or patient case for the presentation.
2. The preceptor will provide a forum for the student presentation.
3. The student will encourage the audience to ask questions and provide feedback on the presentation.

Goal #7: The student will participate in a project that involves an area of the medication use system or addresses patient safety.

Objectives:
1. The project should involve the analysis of collected data with summary of findings and possible recommendations.
2. The student will prepare a summary of the project in which they participated or completed
3. Examples of suitable projects can include but are **not limited to**:
   - Categorize and track of medications errors, adverse drug reactions, or drug recalls.
   - Conduct a failure mode effects analysis (FMEA) to determine potential cause of medication errors.
   - Implement a measure to reduce medication errors associated with a high-alert medication.
   - Conduct a medication utilization evaluation around a patient safety issue.
   - Assess of a medication reconciliation process.
   - Identify and recommend an improvement to a certain aspect of the medication use system utilized by the pharmacy.
   - Monitor and track compliance with a pharmacy policy, procedure, or accreditation standard(s)
   - Develop a unique patient education material for a medication or device
   - Evaluate medication adherence among a select group of patients.
   - Monitor and track storage requirements or expiration dating for medications stored in electronic dispensing device.
   - Monitor and track controlled substance record keeping or the detection of possible drug diversion.
   - Develop a tool or procedure to improve the monitoring of patient drug therapy
   - Assess of a medication monitoring program
   - Any other suitable project which would focus on some aspect of the medication use system or patient safety.

Revised 08/05/2011