



University at Buffalo

**School of Pharmacy and
Pharmaceutical Sciences**

Preceptor Experiential Education Manual

2022-2023

Table of Contents

Office of Experiential Education Program Administration	3
School of Pharmacy and Pharmaceutical Sciences Mission and Vision	4
Experiential Education (IPPE and APPE) Program Outcomes	6
Program Outcome/CAPE Outcome/ACPE Appendix Chart.....	6
JPPC PPCP	8
Direct Patient Care	9
Interprofessional Education	9
Benefits of IPE.....	9
Pharmacy Education and IPE	9
Educational Strategy	9
Attributes of Preceptors	10
Experiential Education Program Rotation Categories	10
IPPE Rotations and Preceptor Categories.....	10
APPE Rotations and Preceptor Categories	11
Students Completing Rotations at Employment Sites	11
New Rotation Development	11
Preceptor Qualifications	11
Elective Preceptors	12
Scheduling	12
Preceptor Activities Overview	12
Preceptor Responsibilities.....	12
Orientation.....	13
Preceptor Expectations	13
Site	13
Curricular Issues	14
Site Standards.....	15
Discrimination and Harassment Policy	14
Student Evaluation of Preceptor and Site	15
Appendices	16
Appendix A Suggested Rotation Activities.....	17
Appendix B Essential Elements for Ambulatory Care.....	19
Appendix C Essential Elements for Community	21
Appendix D Essential Elements for Health Systems	23
Appendix E Essential Elements for Acute Care.....	24

Office of Experiential Education Program Administration

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University at Buffalo

School of Pharmacy and Pharmaceutical Sciences

Mission

To improve health through innovation and leadership in pharmacy education, clinical practice, and research.

Vision

Our commitment to excellence has resulted in a very high employment rate for our graduates while providing them with the skills and knowledge for further career advancement.

- To maintain our ranking as one of the top 20 Schools of Pharmacy and Pharmaceutical Sciences in the United States
- To provide quality education to pharmacy practice and pharmaceutical sciences students at all academic levels, using best-practices and evidence-based educational approaches, enabling our graduates to advance their professions
- To be a leader in education, research, practice, and service
- To be a respected institution that advances basic, clinical, and translational research
- To meet and improve society's health, wellness, and health care
- To advance pharmacy practice, including interprofessional team-based models
- To provide an academic environment that promotes effective mentoring, professional growth and development, and life-long learning

Experiential Education (IPPE and APPE) Program Outcomes

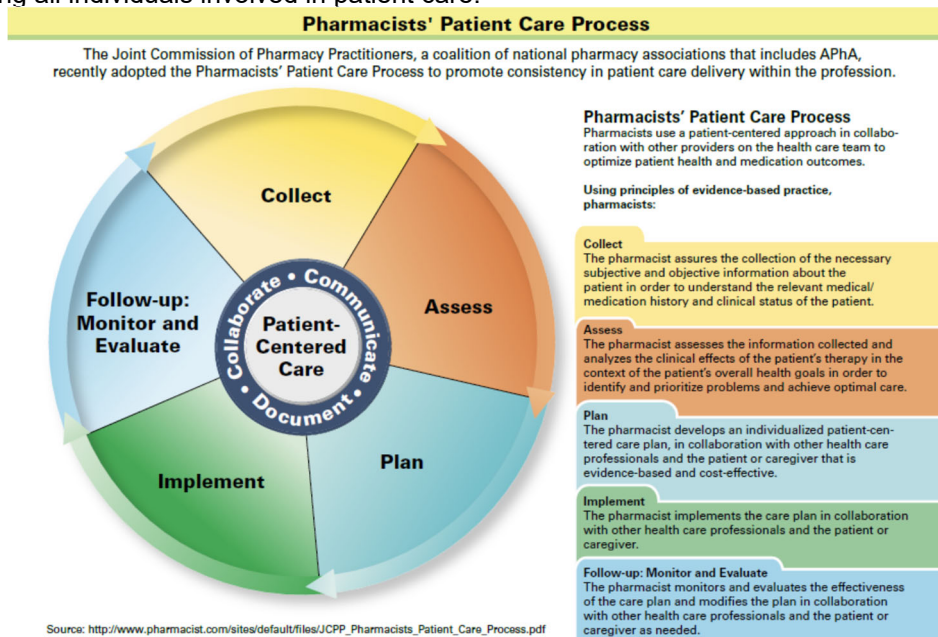
	Program Outcome	CAPE Outcome	ACPE Appendix 1
PROFESSIONALISM	Motivation: Displays eagerness to learn and to effectively care for patients	4.1. Self-awareness (Self-aware) – Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.	Professional Development/Social and Behavioral Aspects of Practice
	Commitment to Excellence: Actively engaged; demonstrates strong work ethic; strives to exceed minimum requirements; punctual; prepared; conscientious; seeks additional knowledge and skills	4.1. Self-awareness (Self-aware) – Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.	Professional Development/Social and Behavioral Aspects of Practice
	Adaptability: Able to modify behavior accordingly when presented with different situations	3.1 Problem Solving (Problem Solver) - Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.	Professional Development/Social and Behavioral Aspects of Practice
	Accountability: Accepts personal responsibility (e.g., for own learning, patient care, etc.); demonstrates preparedness, punctuality, and reliability with commitments in a timely manner; is accountable for their performance, initiates activities when necessary, and contributes overall to the profession; exhibits awareness and adherence to various site policies and procedures	4.4 Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.	Professional Development/Social and Behavioral Aspects of Practice
	Time Management & Organizational: constructively uses spare time, able to prioritize and manage multiple tasks, independently manages times and tasks, meets deadlines	4.4 Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.	Professional Development/Social and Behavioral Aspects of Practice
	Communication: oral, written and non-verbal communication is courteous, respectful, and situationally appropriate; listens attentively.	3.6 Communication (Communicator) - Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.	Professional Communication Professional Development/Social and Behavioral Aspects of Practice
	Integrity & Trustworthiness: Demonstrates high degree of integrity, truthfulness, and fairness; adheres to ethical standards; maintains confidentiality	4.4 Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.	Ethics Professional Development/Social and Behavioral Aspects of Practice
	Professional Demeanor: Displays a positive attitude; nonjudgmental; controls emotions appropriately; carries oneself with professional presence	4.4 Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.	Professional Development/Social and Behavioral Aspects of Practice
	Compassion & Respect for Others: Displays empathy and sensitivity; respectful of different socioeconomic backgrounds and cultural traditions; avoids promoting gossip and rumor; respects authority	3.5 Cultural sensitivity (Include) - Recognize social determinants of health to diminish disparities and inequities in access to quality care.	Cultural Awareness Professional Development/Social and Behavioral Aspects of Practice
	Independent Learner: Commits to lifelong learning; seeks and applies feedback for self-improvement; sets and achieves realistic goals (S.M.A.R.T.); maintains personal health and well-being; avoids harmful behaviors	4.4 Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.	Professional Development/Social and Behavioral Aspects of Practice
COMMUNICATION SKILLS	Global Communication: Effective communication (verbal and non-verbal); uses clear and correct language; sensitive to surroundings.	3.6 Communication (Communicator) - Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.	Professional Communication
	Patient Educator: Proactively perform patient-centered counseling and medication education using the most current and relevant information	3.6 Communication (Communicator) - Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization. 3.2 Educator (Educator) - Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.	Professional Communication
	Communication Style: Adjusts communication style and techniques (e.g., motivational interviewing, coaching and counseling/education) in response to patient-specific needs and individual social determinants of health.	3.6 Communication (Communicator) - Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.	Professional Communication
	Medical Notes: (e.g., MTM, SOAP, pharmacotherapy consult, pharmacokinetic note): Organized; no grammatical or spelling errors; includes all pertinent info; note follows logical sequence; thorough yet concise; avoids bias	3.6 Communication (Communicator) - Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.	Professional Communication
DRUG INFO SKILLS	Literature Retrieval / Appropriate Use of Resources: Effectively uses a variety of sources. Designs effective, thorough search strategy	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., Pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Health Information Retrieval and Evaluation
	Literature Evaluation & Formulating a Response: Able to evaluate literature with sophistication and depth; Applies the obtained information to appropriately answer the specific DI question	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., Pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Health Information Retrieval and Evaluation

	Program Outcome	CAPE Outcome	ACPE Appendix 1
PHARMACOTHERAPY KNOWLEDGE	Pathophysiology of Common Disease States: Able to explain pathophysiologic principles and details	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., Pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Human Physiology
	Pharmacology and Pharmacokinetic Principles: Able to explain drug mechanisms and pharmacokinetic principles of common therapies and drug classes	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., Pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Pharmacology Pharmacokinetics Clinical Pharmacokinetics Pharmacogenomics/genetics Toxicology
	Essential Therapeutic Principles: Able to construct/critique medication regimen rationales and approaches to treatment	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).	Pharmaceutics/Biopharmaceutics
	Interpretation and Analysis of Laboratory Data: Able to interpret and analyze common clinical laboratory test data (e.g., can utilize normal ranges, recognize lab error, understand rationale for ordering specific tests, apply results appropriate, etc.).	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).	Clinical Chemistry Patient Assessment
	Evaluation of Preventative Care: Able to evaluate patient for consideration of prevention and wellness recommendations (e.g., immunizations, self-care, wellness, etc.).	2.3 Health and wellness (Promoter) - Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.	Self-Care Pharmacotherapy Public Health
MED DISTRIBUTION	Prescription Interpretation: Accurately interprets prescription orders and/or safely dispenses medications while applying professional standards and legal guidelines	2.2 Medication use systems management (Manager) - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.	Extemporaneous Compounding Pharmaceutical Calculations Pharmacy Law and Regulatory Affairs Medication Dispensing, Distribution, and Administration
	Legal: Applies pharmacy laws and regulations to all patient and medication related activities	2.2 Medication use systems management (Manager) - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.	Pharmacy Law and Regulatory Affairs
	Inventory Management: Uses and evaluates drug acquisition, inventory control and time sensitive medication distribution systems and related technology, while documenting and maintaining quality.	2.2 Medication use systems management (Manager) - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.	Healthcare Systems Pharmacy Law and Regulatory Affairs Medication Dispensing, Distribution, and Administration
	Systems Management: Applies principles of personnel, financial and marketing management to medication distribution and control systems in pharmacy practice	2.2 Medication use systems management (Manager) - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.	Healthcare Systems Pharmacoeconomics Practice Management Medication Dispensing, Distribution, and Administration
RESEARCH SKILLS	Hypothesis and Objectives: Identifies relevant hypotheses and objectives of project.	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (Pharmaceutical/social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Research Design
	Analysis: Utilizes available resources to design and carry out [statistical / pharmacokinetic / pharmacoeconomic / etc.] analysis of research data; provides graphical representation of data; interprets data into meaningful findings.	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (Pharmaceutical/social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Research Design
	Presentation of Findings: Effectively presents the findings of their project to other individuals (PowerPoint, poster, manuscript, etc.); is able to describe significance and relevance of the project.	1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (Pharmaceutical/social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	Research Design
PPCP	Collect: Assures the collection of the necessary subjective and objective information about the patient in order to understand the relevant medical/medication history and clinical status of the patient	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).	Patient Assessment Pharmacotherapy
	Assess: Assesses the information collected and analyzes the clinical effects of the patient's therapy in the context of the patient's overall health goals in order to identify and prioritize problems and achieve optimal care.	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities). 3.1 Problem Solving (Problem Solver) - Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution. 2.4. Population-based care (Provider) - Describe how population-based care influences patient centered care and influences the development of practice guidelines and evidence-based best practices.	Clinical Chemistry Patient Assessment Pharmacotherapy Natural Products and Alternative and Complementary Therapies
	Plan: Develops an individualized patient-centered care plan, usually in collaboration with other health care professionals and the patient	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).	Pharmacotherapy Self-Care Pharmacotherapy

	or caregiver that is evidence-based and cost-effective.	3.1 Problem Solving (Problem Solver) - Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution. 3.3 Patient Advocacy (Advocate) - Assure that patients' best interests are represented.	
	Implement: Implements the care plan usually in collaboration with other health care professionals and the patient or caregiver.	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities). 3.2 Educator (Educator) - Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.	Pharmacotherapy
	Follow-up (monitor and evaluate): Monitors and evaluates the effectiveness and safety of the care plan and modifies the plan usually in collaboration with other health care professionals and the patient or caregiver as needed.	2.1 Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities). 3.3 Patient Advocacy (Advocate) - Assure that patients' best interests are represented.	Patient Safety Pharmacotherapy
INTERPROFESSIONAL SKILLS	Values and Ethics: Works with individuals of other professions to maintain a climate of mutual respect and shared values.	3.4 Interprofessional collaboration (Collaborator) - Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.	Healthcare Systems Professional Communication Ethics Professional Development/Social and Behavioral Aspects of Practice
	Roles and Responsibilities: Uses the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations.	3.4 Interprofessional collaboration (Collaborator) - Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.	Healthcare Systems Professional Communication Professional Development/Social and Behavioral Aspects of Practice
	Communication: Communicates with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease.	3.4 Interprofessional collaboration (Collaborator) - Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.	Healthcare Systems Professional Communication Professional Development/Social and Behavioral Aspects of Practice
	Teams and Teamwork: Applies relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable.	3.4 Interprofessional collaboration (Collaborator) - Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.	Healthcare Systems Professional Communication Professional Development/Social and Behavioral Aspects of Practice

JCPP PPCP

Pharmacists use a patient-centered approach in collaboration with other providers on the health care team to optimize patient health and medication outcomes. An essential first step is the establishment of a patient-pharmacist relationship that supports engagement and effective communication with patients, families, and caregivers throughout the process. In addition, at the core of the process, pharmacists continually collaborate, document, and communicate with physicians, other pharmacists, and other health care professionals in the provision of safe, effective, and coordinated care. This process is enhanced through the use of interoperable information technology systems that facilitate efficient and effective communication among all individuals involved in patient care.



DIRECT PATIENT CARE

Direct patient care is defined as any interaction a student pharmacist has WITH or FOR a patient. This can be delivered in-person, telephonically or by telemedicine. This can include activities such as dispensing medications, counseling, education, discharge counseling, transition of care activities, optimizing outcomes, self-care, and using evidence-based medicine in decision making, among others.

All four required APPE rotations (Community Pharmacy, Hospital/Health System Pharmacy, Ambulatory Patient Care and Inpatient General Medicine Patient Care) will all allow you to deliver direct patient care. In addition, at least one of your three elective rotations will also allow you to deliver direct patient care. Drug dispensing, in any outpatient or inpatient setting, will allow you to deliver direct patient care

Interprofessional Education

Interprofessional education (IPE) "occurs when two or more professions (students, residents and health workers) learn with, about, and from each other to enable effective collaboration and improve health outcomes" [World Health Organization. [Framework for Action on Interprofessional education and Collaborative Practice](#). 2010.]

Benefits of IPE

IPE prepares health professions students from different professions to work in a collaborative, team environment to provide highly effective patient- and population-centered care. Interprofessional teams enhance the quality of patient care, lower healthcare costs, decrease patients' length of stay, and reduce medical errors. ([Institute of Medicine](#)) Patients receive safer, high quality care when health professionals work effectively in a team, communicate productively, and understand each other's roles.

Pharmacy Education and IPE

The curriculum within the PharmD program will prepare you to provide entry-level, patient-centered care in a variety of practice settings as a contributing member of an interprofessional team. Throughout the curriculum you will be given the opportunity to practice and refine your skills in interprofessional team dynamics (articulating the values and ethics that underpin interprofessional practice, engaging in effective interprofessional communication, including conflict resolution and documentation skills, and honoring interprofessional roles and responsibilities); interprofessional team education (gain an understanding of the abilities, competencies, and scope of practice of team members); and, interprofessional team practice (participate as a healthcare team member in providing direct patient care and engaging in shared therapeutic decision-making. You will participate in experiential educational activities with prescribers/student prescribers and other student/professional healthcare team members, including face-to-face interactions that are designed to advance interprofessional team effectiveness.

Educational Strategy

Our IPE Curriculum is guided by the [Exposure - Immersion - Competency IPE Framework](#) and is designed to develop student pharmacists who are proficient in the [IPEC Core Competencies for Collaborative Practice](#). You will be introduced to the key components of effective interprofessional collaborative practice early in the curriculum and will be given the opportunity to practice and reinforce these skills during the didactic and Introductory Pharmacy Practice Experience (IPPE) components of the curriculum. Competency of these skills is demonstrated in the Advanced Pharmacy Practice Experience (APPE).

For more information about the University's IPE program, please see: <http://www.buffalo.edu/ipe>

ATTRIBUTES OF PRECEPTORS

Preceptors serve as positive role models for students by demonstrating the following qualities (as applicable to their area of practice):

- Practicing ethically and with compassion for patients
- Accepting personal responsibility for patient outcomes
- Having professional education, experience, and competence commensurate with their position
- Utilizing clinical and scientific publications in clinical care decision-making and evidence-based practice
- Desiring to educate others (patients, caregivers, other healthcare professionals, students, residents)
- Demonstrating the willingness and ability to advocate for patients and the profession
- Demonstrating creative thinking that fosters an innovative, entrepreneurial approach to problem solving
- Having an aptitude for facilitating learning
- Being competent in the documentation and assessment of student performance
- Having a systematic, self-directed approach to their own continuing professional development and actively participate in self-directed lifelong learning.
- Collaborating with other healthcare professionals as a visible and contributing member of a team
- Being committed to their practice organization, professional societies, and the community

EXPERIENTIAL EDUCATION PROGRAM ROTATION CATEGORIES

1. IPPE ROTATIONS AND PRECEPTOR CATEGORIES

Second year pharmacy students engage in Community Pharmacy rotation activities over the course of their P2 year. This can include the summer between their P1 and P2 years, the fall semester, over winter break and the spring semester. Students will not be sent out on rotations until their get their NYS Intern Permit.

- A. Community Pharmacy** – contemporary pharmacy practice and direct patient care activities in the Community setting, including but not limited to drug distribution, the PPCP and basic drug information.
1. Student pharmacists complete 2 (two) different community rotations for a minimum of 60 hours each (total of at least 120 hours for the entire P2 year)

Third year pharmacy students engage in Institutional Pharmacy and Outpatient rotation activities over the course of their P3 year. This can include the summer between their P2 and P3 years, the fall semester, over winter break and the spring semester. Student pharmacist WILL complete a total of three (3) rotations: (1) Institutional Pharmacy rotation, (2) Community Pharmacy rotation and (3) EITHER Community or Ambulatory Care rotation.

- A. Institutional Pharmacy** – contemporary pharmacy practice and direct patient care activities in the Institutional (Hospital/Health System) setting, including but not limited to drug distribution, the PPCP and basic drug information.

1. Student pharmacists complete one Institutional rotation for a minimum of 75 hours.

- B. Community Pharmacy** – contemporary pharmacy practice and direct patient care activities in the Community setting, including but not limited to drug distribution, the PPCP and basic drug information.

1. Student pharmacists must complete 1 (one) community rotations for a minimum of 60 hours.
2. Student pharmacist can choose to do a second Community Pharmacy rotation, which would also be a minimum of 60 hours OR student pharmacists can complete an Ambulatory Patient Care rotation (see below).

- C. Ambulatory Patient Care** – contemporary pharmacy practice and direct patient care activities in the Ambulatory Care setting, including but not limited to the PPCP, prospective drug review, patient education and drug information.

1. Student pharmacists would complete a minimum of 60 hours in this Ambulatory Care practice setting.

To assist student pharmacists with working toward achieving the expected level of performance for each major competency area, we have provided a list of suggested activities (**Appendix A**). These suggested activities are an adaptation of the Core Entrustable Professional Activities (EPA) for New Pharmacy Graduates which are discrete, essential activities and tasks that all new pharmacy graduates must be able to perform without direct supervision upon entering practice or postgraduate training. Professionalism, self-awareness, and communication should permeate each activity.

It is expected that the number and extent of activities will vary by preceptor, student, site and rotation type. However, we ask that all rotations at least provide some exposure (even if limited) to each of these major competency areas each rotation. Student pharmacists should be given multiple opportunities at each activity in order to improve their skill, gain confidence, and meet your expectations.

2. APPE ROTATIONS AND PRECEPTOR CATEGORIES

A. PHM 843: Ambulatory Patient Care (6 weeks)

An outpatient clinical rotation that provides the student with direct patient care activities focused on interprofessional patient management, chronic disease management and continuity of care. Depending on the actual site there may also be dispensing activities going on concurrently, however the main objective of this type of rotation is to provide medication therapy management and education for patients' chronic diseases.

To assist student pharmacists with working toward achieving the expected level of performance for each major competency area in Ambulatory Care, we have provided a list of suggested activities known as the *Essential Elements for Ambulatory Care* (**Appendix B**).

B. PHM 844: Community Pharmacy (4 weeks)

A community rotation provides the student with direct patient care activities focused on direct drug distribution and counseling activities. There may also be clinical activities going on concurrently, however the main objective of this type of rotation is to dispense medications in a safe and timely manner following all legal and regulatory requirements of the site/state. Practice management will also be emphasized.

To assist student pharmacists with working toward achieving the expected level of performance for each major competency area in Community Pharmacy, we have provided a list of suggested activities known as the *Essential Elements for Community* (**Appendix C**).

C. PHM 845: Hospital Health Systems Pharmacy (4 weeks)

A hospital health system rotation provides the student with direct patient care activities focusing on understanding how the right medication gets to the right patient at the right time. This usually includes exposure to the drug distribution system, IV admixture preparation, controlled substance management, inventory control, among others. The focus is on system-management and continuous quality improvement.

To assist student pharmacists with working toward achieving the expected level of performance for each major competency area in Hospital Health System, we have provided a list of suggested activities known as the *Essential Elements for Health System* (**Appendix D**).

D. PHM 846: Inpatient General Medicine (6 weeks)

A general medicine rotation provides the student with direct patient care experience in the inpatient setting utilizing a rounding service. The student will manage a diverse patient population with a variety of common conditions seen in adult care patients. The student will also actively contribute as a member of an interprofessional healthcare team.

E. Elective (APPE)

Electives are meant to allow students to explore areas of potential practice interest. This may include practice, research, or other areas of interest for pharmacy students. An elective may include a repeat of any available rotation from the core rotation list.

PHM 847: Elective 1 Direct Patient Care (6 weeks)

PHM 848: Elective 2 Direct or Non-Direct Patient Care (6 weeks)

- Direct patient care is defined as an environment that includes interactions with patient (in person, telephonic or video), in the presence of a licensed pharmacist.

PHM 849: Elective 3 Direct or Non-Direct Patient Care (4 weeks)

- Non-direct patient care is defined as an environment where students do not interact with patients (in person, telephonic or video). Examples include, but are not limited to research, FDA, DEA, pharmaceutical industry, drug information, informatics and management.

STUDENTS COMPLETING ROTATIONS AT EMPLOYMENT SITES

In order for our students to get the best possible experience out of their rotations, we wanted to remind you of some guidance we use when scheduling student rotations. We discourage students from completing IPPE and APPE rotations at the same company they are employed with and certainly they cannot complete a rotation where the rotation preceptor is also their boss/SP. We do allow some crossover especially in our larger hospital systems where the activities the student is doing for a rotation is different than what they do when they are an employee getting paid. We are not asking that you be responsible for any of this, it is the student's responsibility to reach out to the Office of Experiential Education if there is a potential conflict, we just wanted you to be aware of the guidance we try to follow when scheduling these rotations.

NEW ROTATION DEVELOPMENT

A preceptor can develop a specific rotation in conjunction with the Office of Experiential Education, which includes the following: written rotation activities and objectives, coordination of rotation activities and pharmacy input with the assigned physician supervisors, integration of PharmD Student Pharmacists into the ongoing pertinent educational activities of the specific site. [Specific educational activities that student pharmacists should be included in during a clinical rotation are journal club, discussion of pertinent disease states, therapeutic controversies and designated review of primary or secondary literature.] The final approval of these rotation activities is under the auspices of the Office of Experiential Education.

PRECEPTOR QUALIFICATIONS

HEALTHCARE PRECEPTORS

1. Be licensed and in good standing in the jurisdiction in which they practice. Note, non-pharmacists will be limited in the number of APPE rotations they may precept for required rotations. Limit of one required rotation per APPE student and no more than two elective rotations with non-pharmacists. All IPPE rotations must be precepted with US licensed pharmacists.
2. Provide selected information on Preceptor Information Form to the Experiential Education Faculty Advisory Committee, which will be kept on file for all experiential education preceptors. The submission of an updated resume or curriculum vitae is recommended but not required.
3. Maintain high professional standards (i.e., ACPE standards below*).
 - a. The college or school should identify preceptors who will be positive role models for student pharmacists and who, in general, demonstrate the following behavior, qualities, and values (as applicable to their area of practice):
 - i. practice ethically and with compassion for patients
 - ii. accept personal responsibility for patient outcomes
 - iii. have professional training, experience, and competence commensurate with their position
 - iv. utilize clinical and scientific publications in clinical care decision making and evidence-based practice
 - v. have a desire to educate others (patients, care givers, other health care professionals, student pharmacists, pharmacy residents)
 - vi. have an aptitude to facilitate learning
 - vii. be able to document and assess student performance
 - viii. have a systematic, self-directed approach to their own continuing professional development
 - ix. collaborate with other health care professionals as a member of a team
 - x. be committed to their organization, professional societies, and the community
1. Be willing to participate in School of Pharmacy and Pharmaceutical Sciences sponsored preceptor meetings (either live or via WebEx for out-of-town preceptors).
2. Be willing to provide the instruction, supervision and evaluation needed for student pharmacists to complete assignments and achieve competency in the objectives corresponding to the designated rotation(s).
 - a. This requires that preceptors provide evaluation information and reports on student pharmacists, including feedback on areas such as professional skills, personal characteristics, professional ethics and overall performance.

3. Completion of preceptor development activities.
4. Demonstration of a pharmacy practice which expands the role of a pharmacist.

ELECTIVE PRECEPTORS - NON-HEALTHCARE

1. be an active research investigator in academic, research or industrial setting or senior scientist/manager in pharmaceutical industry **AND**
2. prepare the following in conjunction with the EE Director:
 - a. written rotation activities and objectives;
 - b. coordination of student rotation activities
4. Maintain high professional standards (i.e., ACPE standards below*):
 - b. The college or school should identify preceptors who will be positive role models for student pharmacists and who, in general, demonstrate the following behavior, qualities, and values (as applicable to their area of practice):
 - ii. accept personal responsibility for outcomes
 - iii. have professional training, experience, and competence commensurate with their position
 - iv. utilize scientific publications in decision making and evidence-based practice
 - v. have a desire to educate others
 - vi. have an aptitude to facilitate learning
 - vii. be able to document and assess student performance
 - viii. have a systematic, self-directed approach to their own continuing professional development
 - ix. collaborate with other professionals as a member of a team
 - x. be committed to their organization, professional societies, and the community

NOTE: Pharmacists who serve only as an administrative contact person and pharmacists who occasionally supervise students during a rotation need not complete the application for preceptor.

SCHEDULING

Preceptors are asked to arrange the student pharmacist's schedule to optimize on-site learning experiences and accommodate respective obligations beyond the rotation. Schedules should be discussed prior to or on the first day of the rotation to prevent any misunderstandings. At the beginning of the rotation, establish a brief, regular (e.g., weekly) time to meet with the student to discuss his/her progress, etc. Additionally, it is advisable to discuss the schedule for the Midpoint evaluation, assignments and final evaluation at the beginning of the rotation.

PRECEPTOR ACTIVITIES OVERVIEW

1. Establish the student pharmacists' rotation schedule. During this process, note dates for preceptor-student meetings, assignment deadlines, and evaluations.
2. Provide an orientation for the student. Major items to address include site policies and procedures, curricular issues, preceptor expectations, the student pharmacists' entry-level skills and corresponding learning needs, and evaluation.
3. Provide adequate supervision and clear, objective feedback to student pharmacists throughout the rotation (i.e., weekly basis)
4. Review and evaluate student assignments, including providing feedback regarding the student's perception and ability to self-assess all of their coursework. If this is not done or your student does not follow your assignment deadlines for each rotation, the preceptor can reflect this time management deficiency on the Evaluation of Professionalism and Skills form.
5. Complete and discuss the electronic Midpoint and Final Evaluation with the student.

PRECEPTOR RESPONSIBILITIES

1. The preceptor should supervise the written and verbal recommendations made by the PharmD student. All written recommendations made by the PharmD student must be co- signed by the designated preceptor and comply with the legal expectations of the specific institution.
2. A PharmD fellow or resident may oversee the clinical activities of assigned PharmD student pharmacists; however, evaluations of the PharmD student should be done solely by their actual assigned preceptor. All assignments and/or final evaluations must at least be signed by the student's preceptor.
3. The preceptor should orient the student to the required objectives and activities of the rotation as well as the site at the beginning of the rotation.
4. The preceptor should interact with the student by either of the following:

- a. At least three times per week for 1-to-2-hour intervals. During this time, discussions concerning pertinent patient cases, assigned topics/therapeutic controversies and other issues pertinent to the rotation should be included.
 - b. Alternatively, preceptors can schedule 8-12 hours per week (community pharmacy or medical rounds) where the student takes on the primary role of the pharmacist and the preceptor monitors, coaches and mentors the student under direct supervision.
5. Preceptors should be readily available to the student either through beeper or designated meeting times for the scheduled rotation time.
 6. If the preceptor is out of town during a rotation period, then an alternate preceptor should be assigned over the period of absence to deal with any student problems.
 7. The PharmD preceptor should provide a mid-rotation evaluation of the student's performance as well as an exit evaluation. No supportive personnel (e.g., Nurse, Fellow, Resident) can give the PharmD student an evaluation.

START	MIDPOINT	FINAL
<ul style="list-style-type: none"> • Preceptor to review IPPE and/or APPE Longitudinal Feedback Form to assess Strengths/Opportunities 	<ul style="list-style-type: none"> • Review Student's Evaluation of Professionalism and Skills • Complete Student's Evaluation of Professionalism and Skills and review with Student • Confirm hours (daily/weekly) 	<ul style="list-style-type: none"> • Evaluation of Professionalism and Skills • Review Student's IPPE Reflection (last week) [IPPE students ONLY] • Verify hours • Complete APPE and/or IPPE Longitudinal Feedback Form (return to student)

NOTE: It is frequently necessary to spend some time with student pharmacists outside the general activity times, particularly for orientation and evaluation discussions.

ORIENTATION

Preceptors should provide student pharmacists with an orientation on the first day of the rotation or as soon as possible thereafter. An initial orientation can reduce the incidence of misunderstandings and expedite student pharmacists' ability to focus on learning experiences rather than on-site familiarization activities. Topics one may need to address during the orientation will vary by type of training site. However, some basic topics are listed below.

PRECEPTOR EXPECTATIONS

1. Clarify your overall expectations for the student relative to curricular issues, compliance with site policies and procedures, and psychosocial issues including problem or conflict resolution. Discussing one's expectations can minimize misunderstandings, particularly when student pharmacists receive a lower-than-expected rating in an area in which acceptable and unacceptable performance was clearly defined.
2. Clarify your grading policy for each respective student. Remember that a high score should be reserved for a student with "Excellent performance".
3. Be familiar with the CORE system for all electronic forms including all assignment evaluations, Midpoint evaluations and final grading forms.

SITE

1. Tour of Facility
 - a. Information on parking, as needed.
 - b. Lunch facilities.
 - c. Library or resource availability.
 - d. Storage areas.
2. Personnel
 - a. Personnel with whom the student will interact and/or work, including names, preferred title(s), and responsibilities.
 - b. Specifically identify any personnel who will be involved in the student's training.
 - c. Include personnel from other departments in the orientation as appropriate (e.g., head of nursing, medical records, etc.).
3. Site policies
 - a. Proper dress and identification tags, as appropriate.
 - b. Access to patient information and confidentiality.

- c. Punctuality and notice of illness or absences during scheduled rotation time.
 - d. At community sites, items such as charges, check cashing, use of the cash register, sales to employees, shoplifting, etc., should be covered.
4. Site procedures
 - a. Emergency procedures including code blue (cardiac arrest), fire, robbery, etc.
 - b. Opening and closing procedures.
 - c. Proper telephone procedures.
 - d. Computer procedures.
 5. Security issues
 - a. Appropriate parking locations
 - b. Availability of shuttles or escort service
 - c. Specific safety issues
 6. Production Processes

CURRICULAR ISSUES

1. Review the rotation's goals and objectives and indicate any additional objectives you have for the student to achieve. After identifying student learning needs, discuss how you plan to structure activities to facilitate student learning.
2. Discuss the student's assignments and other activities in which you want this student to participate.
3. Establish a schedule of routine preceptor-student meetings (e.g., minimally three times per week) during which student progress will be discussed. Student pharmacists need feedback and guidelines from their preceptors throughout the rotation so that weaknesses are identified and can be addressed before the end of the rotation and final evaluation.
4. Clarify your approach to clinical teaching and your criteria for evaluating student achievement.
5. Review and discuss your evaluation of the student and the longitudinal feedback form with him/her. Your feedback will help the student focus on areas needing improvement.

SITE STANDARDS

All pharmacy sites participating in the Experiential Education program must meet and maintain the basic training site standards listed below:

1. Meet and maintain standards set by all government agencies including the state board, Drug Enforcement Agency, Food and Drug Administration, and the New York Bureau of Narcotic Enforcement.
2. Present a clean, orderly and professional image.
3. Maintain and utilize patient medication profiles to facilitate on going prospective identification of drug related problems.
4. Provide the volume and variety of contemporary experiences related to prescription, non-prescription and health-related items to furnish a wide range of general pharmacy practice experiences.

NOTE: Student pharmacists are to be assigned to learning areas that correlate with the objectives of the particular rotation and to the student pharmacist's weaknesses, e.g., patient consultation and problem solving. The use of student pharmacists to fulfill staffing needs should be minimized.

5. Provide health care information to patients and/or other health care professionals. Printed information should supplement, not substitute for, pharmacist consultation.
 - a. Patient counseling (ideally in a private consultation area) should be a consistent and visible component of community pharmacy service.
 - b. In hospital settings, we encourage pharmacists to provide a role model of patient contact, e.g., medication histories and discharge medication counseling.
 - c. We encourage hospital pharmacists to provide patients with a record of medication use at discharge, which would assist a community pharmacist in providing a continuum of care.
6. Provide services to meet expanded public health responsibilities (e.g., supply health information and provide screening programs).

7. Provide adequate resources (either on-line and/or textbooks) for a student to be able to review drug and health related information if necessary. If access to certain materials/literature is unable to be provided, allowing the student time to utilize University resources (e.g., Health Sciences Library, etc.) as needed is highly recommended.

DISCRIMINATION AND HARASSMENT POLICY

The University at Buffalo prohibits discrimination and harassment and requires that accommodations be provided to individuals when such accommodations are reasonable and necessary as a result of an individual's disability, religion, pregnancy, maternity, breastfeeding, transgender status, or sexual violence victim status. This policy describes how the university will investigate or resolve reports of discrimination and harassment. For more information, please refer to the [Discrimination and Harassment Policy](#).

STUDENT EVALUATION OF PRECEPTOR AND SITE

To be completed by the student pharmacist at the end of each IPPE and APPE rotation. Data are reported in aggregate at the end of the academic year to preceptors, to protect student pharmacist anonymity. Preceptors that have only one experiential education student pharmacist will have their results withheld until there are >1 evaluation completed, again to protect student pharmacist anonymity.

Preceptor Questions

Please rate the preceptor on the following items using the following scale: Almost Never, Seldom, Sometimes/Occasionally, Frequently, Almost Always.

- Provided an orientation to the site, rotation and various learning activities
- Provided formative (i.e., ongoing) evaluation and feedback
- Provided summative (i.e., final) evaluation and feedback
- Provided feedback that identified BOTH weaknesses and strengths
- Communicated his/her expectations
- Demonstrated effective interpersonal skills with staff, patients and student pharmacists
- Was willing to discuss other points of view
- Demonstrated interest in teaching and student pharmacist progress
- Used effective teaching methods
- Suggested or provided readings/citations to support recommendations and decisions
- Was available for adequate supervision, discussion and consultation

Site Questions

Please rate the site on the following items using the following scale: Poor, Fair, Satisfactory, Good, Excellent.

- Ability to achieve rotation's objectives at this site
- Interactions with other health professionals at this site
- Overall rating of this clinical training site
- Variety of clinical patient-oriented learning experiences
- Volume (i.e., number) of clinical learning experiences
- Number of non-patient-oriented learning experiences available (e.g., rotation specific conferences)

Rotation Questions

Please rate the rotation on the following items using the following scale: Poor, Fair, Satisfactory, Good, Excellent.

- School administration/coordination of this rotation, overall
- Rotation goals and objectives
- Knowledge/skills provided by the school to prepare me for this rotation
- Rotation's contribution to my development as a competent professional
- Rotation assignments/learning activities
- System/criteria for evaluating the site/preceptor(s)
- System/criteria for evaluating student pharmacist performance
- Organization/usefulness of this rotation's section of the program manual

Overall Comments (free-text box)

APPENDICES

Appendix A – Suggested Rotation Activities

It is expected that the number and extent of activities will vary by preceptor, student, site and rotation type. However, we ask that all rotations at least provide some exposure (even if limited) to each of these major competency areas each rotation. Student pharmacists should be given multiple opportunities at each activity in order to improve their skill, gain confidence, and meet your expectations.

	Program Outcome	Example Activities
COMMUNICATION SKILLS	Global Communication: Effective communication (verbal and non-verbal); uses clear and correct language; sensitive to surroundings.	Educate patients about self-care and medication self-administration including making recommendations regarding medications (prescription and OTC) and non-drug therapy alternatives <ul style="list-style-type: none"> • Provide appropriate OTC counseling/consulting. • Perform self-care consults.
	Patient Educator: Proactively perform patient-centered counseling and medication education using the most current and relevant information	Proactively perform patient-centered counseling and medication education using the most current and relevant information. <ul style="list-style-type: none"> • Provide medication education on all new prescriptions • Provide medication education on refills when appropriate • Proactively perform patient-tailored counseling and medication education using the most current and relevant information.
	Communication Style: Adjusts communication style and techniques (e.g., motivational interviewing, coaching and counseling/education) in response to patient-specific needs and individual social determinants of health.	
	Medical Notes: (e.g., MTM, SOAP, pharmacotherapy consult, pharmacokinetic note): Organized; no grammatical or spelling errors; includes all pertinent info; note follows logical sequence; thorough yet concise; avoids bias	
DRUG INFO SKILLS	Literature Retrieval / Appropriate Use of Resources: Effectively uses a variety of sources. Designs effective, thorough search strategy.	Educate patients and professional colleagues regarding the appropriate use of medications. <ul style="list-style-type: none"> • Lead a discussion regarding a recently published research manuscript and its application to patient care. • Develop and deliver a brief (less than 1 hour) educational program regarding medication therapy to health professional(s) or lay audience.
	Literature Evaluation & Formulating a Response: Able to evaluate literature with sophistication and depth; Applies the obtained information to appropriately answer the specific DI question.	Use evidence-based information to advance patient care. <ul style="list-style-type: none"> • Retrieve and analyze scientific literature to make a patient-specific recommendation. • Retrieve and analyze scientific literature to answer a drug information question.
PHARMACOTHERAPY KNOWLEDGE	Pathophysiology of Common Disease States: Able to explain pathophysiologic principles and details.	Ensure that patients have been immunized against vaccine-preventable diseases. <ul style="list-style-type: none"> • Determine whether a patient is eligible for and has received CDC-recommended immunizations. • Administer and document CDC-recommended immunizations to an adult patient. • Perform basic life support.
	Pharmacology and Pharmacokinetic Principles: Able to explain drug mechanisms and pharmacokinetic principles of common therapies and drug classes.	Identify patients at risk for prevalent diseases in a population <ul style="list-style-type: none"> • Perform a screening assessment to identify patients at risk for prevalent diseases in a population (e.g., hypertension, diabetes, depression).
	Essential Therapeutic Principles: Able to construct/critique medication regimen rationales and approaches to treatment.	Provide patients with health and wellness strategies including provision of community screening and education services when indicated. <ul style="list-style-type: none"> • Provide patients with health and wellness strategies including provision of community screening and education services when indicated.
	Interpretation and Analysis of Laboratory Data: Able to interpret and analyze common clinical laboratory test data (e.g., can utilize normal ranges, recognize lab error, understand rationale for ordering specific tests, apply results appropriate, etc.).	<ul style="list-style-type: none"> • Deliver preventative disease screening services. • Participate in immunization services. • Participate in point-of-care testing services. • Accurately provide OTC counseling/consulting. • Participate in health fairs. • Prepare and deliver a patient case presentation.
	Evaluation of Preventative Care: Able to evaluate patient for consideration of prevention and wellness recommendations (e.g., immunizations, self-care, wellness, etc.).	
MED DISTRIBUTION	Prescription Interpretation: Accurately interprets prescription orders and/or safely dispenses medications while applying professional standards and legal guidelines	Oversee the pharmacy operations for an assigned work shift. <ul style="list-style-type: none"> • Implement pharmacy policies and procedures. • Supervise and coordinate the activities of the pharmacy technicians and other support staff • Assist in training pharmacy technicians and other support staff. • Assist in the evaluation of pharmacy technicians and other support staff. • Identify pharmacy service problems and/or medication safety issues. • Maintain the pharmacy inventory. • Assist in the management of a pharmacy budget. • Interpret pharmacy quality and productivity indicators using continuous improvement quality techniques. • Assist in the preparation for regulatory visits and inspections.
	Legal: Applies pharmacy laws and regulations to all patient and medication related activities	Fulfill a medication order <ul style="list-style-type: none"> • Enter patient-specific information into an electronic health or pharmacy record system. • Prepare commonly prescribed medications that require basic sterile compounding or basic non-sterile compounding prior to patient use. • Determine if a medication is contraindicated for a patient. • Identify and manage drug interactions. • Determine the patient co-pay or price for a prescription. • Ensure that formulary preferred medications are used when clinically appropriate. • Obtain authorization for a non-preferred medication when clinically appropriate. • Assist a patient to acquire medication(s) through support programs.
	Inventory Management: Uses and evaluates drug acquisition, inventory control and time sensitive medication distribution systems and related technology, while documenting and maintaining quality.	Maximize the appropriate use of medications in a population. <ul style="list-style-type: none"> • Perform a medication use evaluation. • Apply cost-benefit, formulary, and/or epidemiology principles to medication-related decisions.
	Systems Management: Applies principles of personnel, financial and marketing management to medication distribution and control systems in pharmacy practice.	Minimize adverse drug events and medication errors. <ul style="list-style-type: none"> • Assist in the identification of underlying system-associated causes of errors. • Report adverse drug events and medication errors to stakeholders.

Program Outcome		Example Activities
PPCP	Collect: Assures the collection of the necessary subjective and objective information about the patient in order to understand the relevant medical/medication history and clinical status of the patient	<p>Collect information to identify a patient's medication-related problems and health-related needs</p> <ul style="list-style-type: none"> • Collect a medical history from a patient or caregiver. • Collect a medication history from a patient or caregiver. • Discuss a patient's experience with medication. • Determine a patient's medication adherence. • Use health records to determine a patient's health-related needs relevant to setting of care and the purpose of the encounter.
	Assess: Assesses the information collected and analyzes the clinical effects of the patient's therapy in the context of the patient's overall health goals in order to identify and prioritize problems and achieve optimal care.	<p>Analyze information to determine the effects of medication therapy, identify medication-related problems, and prioritize health-related needs</p> <ul style="list-style-type: none"> • Assess a patient's signs and symptoms to determine whether the patient can be treated within the scope of practice or requires a referral. • Measure an adult patient's vital signs and interpret the results (e.g., body temperature, pulse rate, respiration rate, and blood pressure). • Interpret laboratory test results. • Identify drug interactions. • Perform a comprehensive medication review (CMR) for a patient. • Assess a patient's health literacy using a validated screening tool. • Compile a prioritized health-related problem list for a patient. • Evaluate an existing drug therapy regimen.
	Plan: Develops an individualized patient-centered care plan, usually in collaboration with other health care professionals and the patient or caregiver that is evidence-based and cost-effective.	<p>Establish patient-centered goals and create a care plan for a patient in collaboration with the patient, caregiver(s), and other health professionals that is evidence-based and cost-effective.</p> <ul style="list-style-type: none"> • Follow an evidence-based disease management protocol. • Develop a treatment plan with a patient. • Manage drug interactions. • Select monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan. • Determine the appropriate time interval(s) to collect monitoring data. • Create a patient-specific education plan.
	Implement: Implements the care plan usually in collaboration with other health care professionals and the patient or caregiver.	<p>Implement a care plan in collaboration with the patient, caregivers, and other health professionals.</p> <ul style="list-style-type: none"> • Write a note that documents the findings, recommendations, and plan from a patient encounter. • Educate a patient regarding the appropriate use of a new medication, device to administer a medication, or self-monitoring test. • Educate a patient on the use of medication adherence aids. • Assist a patient with behavior change (e.g., use shared decision making and motivational strategies).
	Follow-up (monitor and evaluate): Monitors and evaluates the effectiveness and safety of the care plan and modifies the plan usually in collaboration with other health care professionals and the patient or caregiver as needed.	<p>Follow-up and monitor a care plan.</p> <ul style="list-style-type: none"> • Collect monitoring data at the appropriate time interval(s). • Evaluate the selected monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan. • Recommend modifications or adjustments to an existing medication therapy regimen based on patient response. • Present a patient case to a colleague during a handoff or transition of care.
INTERPROFESSIONAL SKILLS	Values and Ethics: Works with individuals of other professions to maintain a climate of mutual respect and shared values.	<p>Collaborate as a member of an interprofessional team</p> <ul style="list-style-type: none"> • Contribute medication-related expertise to the team's work. • Explain to a patient, caregiver, or professional colleague each team member's role and responsibilities. • Communicate a patient's medication-related problem(s) to another health professional. • Use setting appropriate communication skills when interacting with others • Use consensus building strategies to develop a shared plan of action.
	Roles and Responsibilities: Uses the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations.	
	Communication: Communicates with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease.	
	Teams and Teamwork: Applies relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable.	

Appendix B – Essential Elements for Ambulatory Care

Element	Example Learning Objectives or Activities*	Comments
Pharmacist Patient Care (PPC)		
<p>PPC 1. Demonstrate appropriate depth and breadth of pharmacotherapeutics and disease-related knowledge for common conditions in the ambulatory care clinic population.</p>	<ul style="list-style-type: none"> • Participate and/or lead topic discussions. • Apply the PPCP to every patient assigned by preceptor, essentially independently, and present to preceptor. 	<p>We recognize that the patients seen on this rotation could represent a variety of specialty and primary care clinics depending on the geographic area and local practice model. The goal is to see the most common disease states generally encountered in the clinic setting. This is not a dispensing experience.</p>
<p>PPC 2. Efficiently and appropriately optimize patient-specific outcomes for ambulatory care patients using the Pharmacist Patient Care Process (PPCP), in collaboration with other healthcare providers.</p>	<ul style="list-style-type: none"> • Perform a patient history and systematically collect information sufficient to identify drug related problems and to support decisions regarding drug therapy. • Perform, obtain and interpret physical assessments needed for managing medication therapy. • Assess collected information to evaluate/identify drug related problems. • Make decisions about a care plan for treatment; prevention; and wellness to optimize patient outcomes that includes, but not limited to, strategies that overcome patient-specific barriers to care. • Implement a care plan in collaboration with health care team and patient that includes monitoring and continuity of care, and considerations for triage, patient referral, and follow-up. • Monitor and evaluate care plan, make needed adjustments. 	<p>Practicing the PPCP as it applies in the clinic setting should form the majority of this experience.</p>
Communication and Education (C&E)		
<p>C&E 1. Document patient care activities and care plan clearly and concisely to reflect the PPCP in the appropriate site-specific system.</p>	<ul style="list-style-type: none"> • Accurately and efficiently perform types of documentation pharmacists do in this setting: <ul style="list-style-type: none"> ○ SOAP notes for inclusion in medical record. ○ Care notes from face-to-face patient visits. ○ Interventions/recommendations made to team for patient care. • Report in writing cost outcomes necessary for ACO reporting. 	<p>As pharmacists gain provider status (especially in the clinic setting) documentation becomes imperative for appropriate reimbursement to happen. Students should gain experience at documentation practices while on this experience.</p>
<p>C&E 2. Advocate for patient access to medications to optimize patient outcomes.</p>	<ul style="list-style-type: none"> • Identify common avenues for accessing drug/medication assistance programs for un/non-insured patients. • Assist a patient whose insurance has denied coverage for a necessary medication in obtaining that medication through either an insurance appeal or a medication assistance program 	<p>Not all insurance companies are able to add new, and often essential, medications to their formularies, and the pharmacist is the ideal practitioner to help the patient access the medication.</p>
<p>C&E 3. Perform patient-centered medication education.</p>	<ul style="list-style-type: none"> • Demonstrate teach back method for instructing patients with devices. • Appropriately apply techniques to assess patient understanding. 	<p>Recommendation: Push students to show this skill proactively and/or independently to emphasize leadership and self-awareness abilities.</p>

<p>C&E 4. Adjust communication style, techniques, and language in response to patient-specific needs and individual social determinants of health.</p>	<ul style="list-style-type: none"> • Demonstrate common communication techniques used in this setting: <ul style="list-style-type: none"> ○ motivational interviewing, ○ coaching ○ counseling/education ○ teach back ○ teaching for devices. • Social determinants of health that should be given attention include culture, religion, health literacy, literacy, disabilities, and cognitive impairment. 	<p>Practice in the clinic involves significant communication and cooperation with patients to help them take their medications properly. It is the cornerstone of practice in this setting. Students should spend significant time performing these skills.</p>
<p>Interprofessional Collaboration (IPC)</p>		
<p>IPC 1. Actively contribute as a member of an interprofessional healthcare team.</p>	<ul style="list-style-type: none"> • Independently communicate medication therapy recommendations to members of the healthcare team • Share accountability for patient care decisions with the team • Demonstrate effective teamwork/collaboration skills • Present patient cases to other members of the team 	<p>Collaborating with others on the health care team happens in many settings. However, it can be difficult to achieve the community pharmacy setting. Yet it is necessary to experience teamwork unique to the ambulatory care setting. While schools may choose to incorporate team collaboration into other APPEs, we feel it should at a minimum be required during this experience because the likelihood of shared decision-making is greater in the clinic setting as opposed to a community pharmacy.</p>
<p>Evidence Based Medicine (EBM)</p>		
<p>EBM 1. Apply evidence-based medicine practices to demonstrate knowledge of information applicable to ambulatory care practice.</p>	<ul style="list-style-type: none"> • Retrieve, interpret, and apply biomedical literature applicable to the patients seen on this rotation. • Respond to questions with the appropriate level of detail necessary to ensure proper patient care and communication with other relevant parties. • Analyze a clinical study. • Prepare and lead a Journal club • Defend/justify recommendations using with published evidence in support of a clinical situation . • Present patient cases, disease or medication related topics to health care professionals. 	
<p>Practice-Specific Responsibilities (PSR)</p>		
<p>PSR 1. Use population-level data and quality metrics to identify and develop practices or strategies for improving outcomes and/or addressing health promotion and disease prevention for the population served by the clinic.</p>	<ul style="list-style-type: none"> • Participate in a MUE/DUE or other type of data collection and review to assess the effectiveness of a treatment regimen or pathway. 	<p>The need for pharmacists to help manage a costs and drug prescribing for a panel (ie. population) of patients is ever growing. Students should get experience doing this as it is becoming a core component of practice in this setting.</p>

*Example learning objectives are provided as additional information but are neither comprehensive nor expected of all schools or students.

Appendix C – Essential Elements for Community

Element	Example Learning Objectives or Activities*	Comments
Pharmacist Patient Care (PPC)		
<p>PPC 1. Efficiently and appropriately optimize patient-specific outcomes using the Pharmacist Patient Care Process (PPCP) in the community pharmacy setting, including collaboration with other healthcare professionals.</p>	<ul style="list-style-type: none"> Collect patient information and interpret it based on results of monitoring parameters to support improved patient outcomes Perform disease state management services Conduct formal MTM process Assess and resolve problems identified as part of prospective or retrospective drug utilization review. Make recommendations and/or modify care plans to address patient specific needs When possible, initiate/change drug therapy to address patient specific needs Perform CMR when appropriate and make recommendations/changes accordingly Prepare and deliver a patient case presentation 	<p>Preferred that this competency include Disease State Management (DSM) AND/OR Medication Therapy Management (MTM) so that this experience is an advanced community experience as opposed to the introductory community experience.</p> <p>We have split out disease state management (DSM) from MTM, because in reality it is a different process. DSM refers to collaborative practice, which varies site-to-site and state-to-state, where as MTM is a specific reimbursed service/process.</p> <p>Recognizing that MTM is delivered in many ways and may vary with plans, we did not specify "Perform a CMR" as the competency itself but provided some flexibility in demonstrating this competency.</p>
<p>PPC 2. Proactively identify and resolve drug-related problems including patient-specific barriers to medication adherence.</p>	<ul style="list-style-type: none"> Perform effective prospective, concurrent, and retrospective drug utilization review Create and implement care plans to resolve identified potential or existing drug therapy problems Identify medication adherence concerns and construct patient-specific interventions to improve adherence Conduct formal MTM process Perform CMR when appropriate and make recommendations/changes accordingly Prepare and deliver a patient case presentation 	<p>This element can be accomplished through a variety of tasks (formal and informal) in the course of identifying and resolving drug related problems for patients. This could be accomplished as part of MTM and/or preparing a patient case presentation. The responsibilities will need to be made site specific.</p>
<p>PPC 3. Educate patients about self-care and medication self-administration including making recommendations regarding medications (prescription and OTC) and non-drug therapy alternatives.</p>	<ul style="list-style-type: none"> Provide appropriate OTC counseling/consulting. Perform self-care consults. 	<p>This could be accomplished as part of MTM.</p>
<p>PPC 4. Triage and refer patients to other members of the health care team to meet a specific patient's health needs.</p>	<ul style="list-style-type: none"> Perform an assessment including History of Present Illness (HPI) to determine the appropriate level of care Match patient health needs to the roles and responsibilities of other healthcare professionals Make recommendations and/or modify care plans to address patient specific needs 	
Communication and Education (C&E)		
<p>C&E 1. Proactively perform patient-centered counseling and medication education using the most current and relevant information.</p>	<ul style="list-style-type: none"> Provide medication education on all new prescriptions Provide medication education on refills when appropriate Proactively perform patient-tailored counseling and medication education using the most current and relevant information. 	
<p>C&E 2. Adjust communication styles and techniques (e.g. motivational interviewing, coaching, counseling/education) in response to patient specific needs and individual social determinants of health (e.g. culture, religion, health literacy, literacy, disabilities, and cognitive impairment).</p>	<ul style="list-style-type: none"> Implement motivational interviewing techniques to improve patient adherence Alter prescription counseling strategies based on patient or caregiver needs Assess effectiveness of counseling or other communication using the teach back method and re-adjust technique until understanding is confirmed 	<p>This could be included in the process of MTM, prescription filling, or OTC consults. Consider including communicating with other health care providers as part of this element.</p>

Population Health (PH)		
PH 1. Provide patients with health and wellness strategies including provision of community screening and education services when indicated.	<ul style="list-style-type: none"> • Provide patients with health and wellness strategies including provision of community screening and education services when indicated. • Deliver preventative disease screening services. • Participate in immunization services. • Participate in point-of-care testing services. • Accurately provide OTC counseling/consulting. • Participate in health fairs. • Prepare and deliver a patient case presentation. 	
Dispensing System and Safety Management (D&S)		
D&S 1. Accurately apply the prescription verification process (e.g. legitimate prescription, appropriate dose, interactions, DUR).	<ul style="list-style-type: none"> • Accurately fill prescriptions while operating within the workflow of the practice site. 	
D&S 2. Use a computerized pharmacy management system and best practices related to safe medication use in distribution of medications to patients.	<ul style="list-style-type: none"> • Accurately fill prescriptions while operating within the workflow of the practice site. 	
Practice Management (PM)		
PM 1. Demonstrate the role of a pharmacist in managing legal, human, financial, technological and/or physical resources for day-to-day operations in the pharmacy.	<ul style="list-style-type: none"> • Identifies situations requiring the intervention and management of the pharmacist in the community pharmacy setting. • Identifies strengths and areas for improvement within the practice or business model, considering alternatives and potential strategies. • Discusses site's budget and financial projections. • Identifies opportunities for staff training and creates a training plan. • Provides an in-service to pharmacy staff. • Given a human resources conflict, describes perspectives of all involved. • Completes a needs assessment regarding technology at the site. • Examines the pros and cons of the site's physical layout and develops an improvement plan. • Conducts an inventory analysis and creates a plan to increase turnover. • Writes a report about strategies to manage drug shortages. • Contrasts pharmacist and pharmacy technician activities at the site and makes recommendations to improve workflow. • Reviews the drug storage policies to ensure proper drug storage. 	
PM 2. Participate in continuous quality improvement techniques to optimize the medication use process.	<ul style="list-style-type: none"> • Apply the CQI process within the site's procedures for quality improvement. • Evaluate CQI data to determine improvement opportunities. • Create a report recommending potential improvements based on site data. • 4. Participate in the reporting of quality-related events. 	While CQI is often emphasized in hospital practice, it is important in the outpatient setting too. Students should have opportunity to engage in these activities in the community pharmacy to see how they occur in this setting.

*Example learning objectives are provided as additional information but are neither comprehensive nor expected of all schools or students.

Appendix D – Essential Elements for Health System

Element	Example Learning Objectives or Activities*	Comments
Dispensing System and Safety Management (D&S)		
D&S 1. Accurately verify new medication orders.	<ul style="list-style-type: none"> For any given medication order, succinctly and accurately explain out loud all steps (e.g. legitimate prescription, appropriate dose, interactions, overlapping side effects, DUR) in the thought process needed for verification. 	
D&S 2. Ensure the accurate preparation of medication orders	<ul style="list-style-type: none"> Oversees the preparation of the order, product choice, delivery Given a medication order for a parenteral product, determine the correct compounding technique and related administration instructions Given a new or unfamiliar IV product for which there are no order sets or standard admixture, identify the correct mixing technique/compounding, choice of diluent(s), packaging, labelling, infusion rate, concentration (central line versus peripheral), compatibility, expiration dating, and any requirements for safe administration. Review non-formulary requirements and approval process for individual orders as they are presented. Follow the approval process for non-formulary medication orders, including what products are uniquely sourced, how a distributor is identified, and how to place an order for such a product Navigate drug selection based on formulary options 	
D&S 3. Respond appropriately to basic drug procurement issues using site protocol(s).	<ul style="list-style-type: none"> Appropriately respond to medication orders for which there are shortages. 	
The following competency is required for entry level practitioners and can be addressed via pre-APPE competencies or APPE competency activity based on program preference:		
D&S 4. Perform IV admixture	<ul style="list-style-type: none"> Where applicable/available, based on state requirements 	Test as an APPE readiness simulation—NOT as a uniform APPE activity
Practice Management (PM)		
PM 1. Oversee the workflow of the dispensing process.	<ul style="list-style-type: none"> For a reasonable amount of time, manage the workflow of the dispensing process, including answering phone calls, delegating tasks, checking batched and compounded medications, and other administrative tasks commonly performed by pharmacists in the central fill setting. Using the idea of pilot: co-pilot (aka preceptor: student) example, a student oversees the workflow, as a pharmacist would be expected to do 	
PM 2. Participate in continuous quality improvement projects to assess and/or optimize the medication use process.	<ul style="list-style-type: none"> Participate in an exercise that measures, improves, or clarifies some aspect of pharmacy services quality or patient safety. Active engagement in formulary decision making activities (e.g., prepare monograph, prepare presentation, etc.) 	

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Appendix E – Essential Elements for Acute Care

Element	Example Learning Objectives or Activities*	Comments
Pharmacist Patient Care (PPC)		
PPC 1. Demonstrate appropriate depth and breadth of pharmacotherapeutics and disease-related knowledge for a variety of common conditions seen in adult acute care patients.	<ul style="list-style-type: none"> Participate in and/or lead topic discussions. Apply the PPCP to every patient assigned by preceptor, essentially independently, and present to preceptor. 	We recognize that the patients seen on this rotation may exist in any specialty floor or ICU depending on the hospital size, census and patient demographics served. The goal is to see the most common disease states generally encountered in the acute care setting.
PPC 2. Efficiently and appropriately optimize patient-specific outcomes for acute care patients using the Pharmacist Patient Care Process (PPCP).	<ul style="list-style-type: none"> Systematically collect information sufficient to identify drug related problems and to support decisions regarding drug therapy. Assess collected information to evaluate/identify drug related problems. Make decisions about a care plan for treatment; prevention; and wellness to optimize patient outcomes that includes, but not limited to, strategies that overcome patient-specific barriers to care. Implement a care plan in collaboration with health care team and patient that includes monitoring and continuity of care, and considerations for triage, patient referral, and follow-up. Monitor and evaluate care plan, make needed adjustments. 	<p>Practicing the PPCP as it applies in the acute care setting should form the majority of this experience. There are 2 types of clinical practice models in the acute care setting:</p> <ul style="list-style-type: none"> <i>Patient-specific</i>: taking care of whole individuals (including their entire list of drug therapy) by serving on a team that manages a set of patients (usually rounds with team) <i>Task-oriented</i>: performing kinetic dosing or other monitoring/adjustment for specific drugs according to protocol, performing focused discharge teaching for high risk drugs such as anticoagulation (may or may not include rounding with team) <p>The practice model in an institution often dictates the nature and type of work pharmacists do with or along side their health care teammates. Preceptors will need to work within their practice model to allow students to accomplish these competencies while working collaboratively with other health professionals.</p>
PPC 3. Accurately prioritize multiple patient care responsibilities/needs in times of high activity and workload.	<ul style="list-style-type: none"> Determine which patient's needs should be addressed first Address patient needs within an appropriate time, based on priority/acuity. Communicate clearly and appropriately regarding patient work that is unable to be completed during an assigned work shift (ie. hand-off). 	The expectation is to have students gain experience managing multiple patients or tasks at once, so they learn how to prioritize and manage time. This also helps students see the importance of developing a standard, efficient process for working up patients and approaching a days work.
PPC 4. Apply pharmacokinetic dosing principles for a variety of commonly used drugs to determine the correct dose.	<ul style="list-style-type: none"> Accurately adjust doses according to patient's renal and/or hepatic function. Perform dose calculations for drugs that require monitoring for peak and trough concentrations. Participate in dosing protocols that pharmacists are responsible for in the practice site. 	While dosing calculations are performed in many settings, pharmacokinetic dosing per protocol is a common responsibility of hospital pharmacists. Students should contribute to this work as appropriate.
Communication and Education (C&E)		
C&E 1. Document patient care activities clearly and concisely to reflect the PPCP in the appropriate site-specific health record system(s).	<ul style="list-style-type: none"> Write SOAP notes for inclusion in the patient's medical record Document pharmacist activities as part of a clinical intervention tracking system (where appropriate) Document treatment plans under protocol (eg. Vanocmycin, anticoag) Document medication histories/reconciliation in EMR Document patient education encounters 	<p>Examples of other types of documentation pharmacists may do in this setting:</p> <ul style="list-style-type: none"> Interventions/recommendations for patient care Outcomes for ACO reporting: Cost savings or length of stay <p>Achieving provider status involves documentation, so whenever possible, students should participate in these processes to gain experience in documentation methods.</p>
C&E 2. Educate healthcare team members on pharmacy topics relevant to their roles and practice.	<ul style="list-style-type: none"> Provide a formal education presentation, for example: <ul style="list-style-type: none"> Patient case presentation Medication information in-service presentations Lead informal topic discussions/presentations with/for the interprofessional team 	Students learn to present to peers who are health care providers. This kind of communication is different than with patients. Speaking with colleagues is an important skill in establishing credibility with team members.

Interprofessional Collaboration (IPC)		
IPC 1. Actively contribute as a member of an interprofessional healthcare team.	<ul style="list-style-type: none"> Independently communicate medication therapy recommendations to members of the healthcare team. Share accountability for patient care decisions with the team. Demonstrate effective teamwork/collaboration skills. Participate in rounds with other health care professionals (if possible). 	Collaborating with others on the health care team happens in many settings, however, the greatest opportunity for it is in the inpatient setting where team members are co-located. While schools may choose to incorporate team collaboration into other APPEs, we feel it should at a minimum be required during this experience where face-to-face interactions make shared decision-making more likely.
Evidence-Based Medicine (EBM)		
EBM 1. Apply evidence-based medicine practices to demonstrate knowledge of information applicable to acute care medicine.	<p>Retrieve, interpret, and apply biomedical literature applicable to the patients seen on this rotation.</p> <p>Respond to questions with the appropriate level of detail necessary to ensure proper patient care and communication with other relevant parties.</p> <p>Analyze a clinical study.</p> <p>Prepare and lead a Journal club.</p> <p>Defend/justify recommendations using with published evidence in support of a clinical situation.</p>	
Practice-Specific Responsibilities (PSR)		
PSR 1. Perform institutional procedures and apply best practices to ensure continuity of care for patients transitioning across healthcare settings.	<p>Perform medication reconciliation as appropriate.</p> <p>Provide discharge counseling as appropriate.</p> <p>Participate in communications regarding transitions of patients between different levels of care in the same institution (ICU to ward).</p> <p>Communicate with community pharmacist and other community providers to facilitate successful transition to home upon discharge.</p>	Processes for transitions of care and medication reconciliation vary from institution to institution. As this responsibility grows for pharmacists, students should participate in and contribute to these responsibilities that pharmacists have during admission, transfer, and discharge.

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