Precepting Fundamentals

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Tell me and I forget, teach me and I may remember, involve me and I learn.

Chinese Proverb
Learning Objectives

- Define precepting and mentoring.
- Integrate competency development and assessment into rotations based on educational standards that impact pharmacy education.
- Create activities that provide students with the opportunity to meet learning objectives while meeting work requirements.
- Define and discuss the main areas of focus for preceptors.
- Identify technical skills and abilities for preceptors.
- Identify core values of preceptors.

Being an effective preceptor is a significant but very rewarding professional responsibility, different from being a competent pharmacist. You must have an understanding of precepting fundamentals, determine learning objectives that align with the program expectations and your practice, and have outlined expectations of your student or resident as well as your related duties and responsibilities. Because precepting involves one-on-one communication, interpersonal and teaching skills are very important. Even a seasoned preceptor must continue to improve his or her skills. This chapter addresses the foundational expectations of being a successful preceptor and provides insights into the basics of successful and rewarding precepting.

Origins of Precepting

The theories of precepting and mentoring have existed for a long time and can be traced back to ancient Greece and Greek mythology. Precepting is a practice of providing a learner the opportunity to develop and apply the art and science of a profession in a practice setting. This practical experience also enables development and shaping of the values and attitudes of the learner.

The earliest reference to precepting can be found in the Hippocratic oath, written about 400 B.C. by the great Greek physician Hippocrates.\textsuperscript{1,2} In his famous oath, Hippocrates defined a set of very compelling duties and responsibilities of the physician, which can be applied to preceptors as well. A strong and enduring commitment to patient care was formed as the art of medicine was passed down from father to son and from preceptor to student. Today, the foundational knowledge of pharmacy and practice expectations are taught in colleges and schools of pharmacy, but the art is still passed on from preceptor to student.

Understanding the evolution of the role of precepting in our profession provides insights into how we progressed. Current pharmacy curricula now require more than 30% of a student’s education to be in practice settings completing their Introductory Pharmacy Practice Experiences (IPPE; 300 hours minimum per the Accreditation Council for Pharmacy Education [ACPE]) concurrent with their didactic training, followed by their entire final year of full-time training in their Advanced Pharmacy Practice Experiences (APPE; minimum of 1440 hours per ACPE).\textsuperscript{3} The continued evolution and growth of pharmacy practice residencies has further expanded the need and opportunity for pharmacists to serve as preceptors. Postgraduate residency training is viewed as an asset to promote professional development and education.\textsuperscript{4}
As chronicled by Henri Manasse in his 1973 article “Albert B Prescott’s Legacy to Pharmaceutical Education,” the education of a pharmacist in the early 1800s was entirely “experiential,” based on completing an apprenticeship. Contrast this description by Professor Edward Parish to today’s experiential training:

The apprentice enjoyed a wholesome development of muscle through wielding the ponderous pestle, handling the sieves and working the screw press. He learned how to make pills by wholesale, to prepare great jars of extracts and cerates, to bottle castor oil, Turlington’s balsam and opodeldoc by the gross, and what he lacked in the number and variety of articles he dealt in, was made up by the greater extent of his operations and the completeness with which, in a single establishment, all the then-known processes were practiced.

This was how pharmacy education began.

The first colleges of pharmacy required an apprenticeship as a condition of beginning formal pharmacy education. It was not until the 1860s that pharmacy education was required before training as an apprentice. By the middle of the 20th century experiential training was almost entirely mandated as paid internships by, and overseen by, boards of pharmacy. Experiential education has evolved and is primarily overseen by pharmacy schools as the mandated intern training required by most state boards of pharmacy. Many practice settings are now identifying roles for pharmacy students during their experiential rotations and as employed interns where they are depended on to be an extension of the pharmacists and their preceptors in the provision of patient-focused services.

Today, precepting is vital to the professional growth and development of pharmacy students and pharmacists and to the future of the pharmacy profession. We rely on experienced practitioners to become preceptors and to pass down knowledge and experience to their students and residents. Precepting involves a partnership for education, investment of time and energy, negotiation and individualization of learning activities, teamwork, coaching, evaluation of performance, and professional role modelling and guidance. Preceptors ensure that their learners attain competency at the practice of pharmacy much in the same way that the apothecary supervised their apprentices in developing the skills of the trade. Service is exchanged for education and training.

Residency precepting provides opportunities for more in-depth and demanding training as well as greater engagement and contributions to the provision of and advancing pharmacy services. One desired outcome of residency precepting should be for the resident to be a preceptor for future practitioners.

Students as well as residents and new practitioners may benefit from seeking out a pharmacist mentor. Unlike being a preceptor, a mentoring relationship usually involves ongoing engagement with a mentee. These relationships require a much greater investment of time and commitment by both parties but also allow for a greater sense of accomplishment by both individuals. Often, a mentoring relationship evolves during and continues after a rotation with a preceptor but should be formalized through a conversation that results in both parties’ commitment to the relationship. Mentoring is a relationship based on trust and respect: education and nurturing; inspiration to advance the practice of pharmacy and improve patient care; opportunities to grow and develop; metamorphosis through engaging in a process of self-reflection, self-assessment, and self-transformation; professional guidance; and nomination for awards when success has been achieved. We depend on preceptors to also become mentors and to help their mentees attain professional excellence and become leaders (see Chapter 4 for more information on mentoring).

Pharmacy preceptors and mentors provide the most critical aspects of professional education and training and can truly make a difference in the lives and careers of their learners and mentees.

Standards Impacting Experiential Education and Preceptors

Expectations of students and preceptors are impacted by a number of organizations that have developed positions and standards specific to pharmacy education, including
experiential training. Preceptors should become familiar with the intent and expectations of preceptors and students as defined by each organization noted below. The focus of pharmacist education today is shaped by the Joint Commission of Pharmacy Practitioners Vision statement (adopted by the 10 pharmacy organization members in 2013), which states: “Patients achieve optimal health and medication outcomes with pharmacists as essential and accountable providers within patient-centered, team-based healthcare.”

ACCREDITATION COUNCIL FOR PHARMACY EDUCATION

Schools of pharmacy must meet accreditation standards for Doctor of Pharmacy Programs established by the ACPE. They have recently released new standards that will become effective in 2016. Of note is the increased focus on interprofessional education in Standard 11 that states:

The curriculum prepares all students to provide entry-level, patient-centered care in a variety of practice settings as a contributing member of an interprofessional team. In the aggregate, team exposure includes prescribers as well as other health care professionals.

Standard 12 focuses on the “Pre-Advanced Pharmacy Practice Experience (Pre-APPE) Curriculum,” where expectations of the IPPEs are defined, including the minimum of 300 hours of experiential training. Standard 13 defines expectations of the APPE Curriculum. For the 1440 required APPE hours, it is required that APPEs occur in four practice settings: (1) community pharmacy, (2) ambulatory patient care, (3) hospital/health-system pharmacy, and (4) inpatient general medicine patient care. Appendix 2 of the APPE curriculum defines specific expectations. Many are using the term APPE-ready to express the expectation that core student competencies must be assessed and met prior to students beginning their APPE rotations.

ACPE standards have been developed to integrate expectations defined by or supported by the pharmacy profession. The following documents are valuable references for preceptors:

CAPE EDUCATIONAL OUTCOMES 2013
In 2013 the AACP Center for the Advancement of Pharmacy Education (CAPE) released the fourth version of the CAPE Educational Outcomes. This initiative resulted in a publication that “was guided by an advisory panel composed of educators and practitioners nominated for participation by practitioner organizations.” The document defines expected student competencies in four broad domains. Preceptors are encouraged to review the entire document online, where learning objectives for each competency domain are provided. Rotation objectives and evaluations developed by schools should focus on developing and assessing relevant student competencies by preceptors. Preceptors should define rotation-specific expectations and roles for students to develop and demonstrate competencies consistent with your school’s expectations and the CAPE outcomes. The first four ACPE 2016 standards focus on achieving these four domains of educational outcomes (see Box 1-1).

BOX 1-1. CAPE Outcomes

DOMAIN 1—Foundational Knowledge
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.

DOMAIN 2—Essentials for Practice and 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).
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.
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.

DOMAIN 3—Approach to Practice and Care

3.1. Problem solving (problem solver)—Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

3.2. Educator—Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.

3.3. Patient advocacy (advocate)—Assure that patients’ best interests are represented.

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.

3.5. Cultural sensitivity (includer)—Recognize social determinants of health to diminish disparities and inequities in access to quality care.

3.6. Communication (communicator)—Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

DOMAIN 4—Personal and Professional Development

4.1. Self-awareness—Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.

4.2. Leadership—Demonstrate responsibility for creating and achieving shared goals, regardless of position.

4.3. Innovation and entrepreneurship (innovator)—Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

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.

INSTITUTE OF MEDICINE REPORT: HEALTH PROFESSIONS EDUCATION: A BRIDGE TO QUALITY9

As part of the Institute of Medicine (IOM) Quality Chasm Series to improve patient safety and patient outcomes, the IOM identified five competencies that all healthcare professionals should attain during their education:

- Provide patient-centered care
- Work in interprofessional teams
- Employ evidence-based practice
- Apply quality improvement
- Utilize informatics

These are also integrated into the ACPE standards.

REVISED NORTH AMERICAN PHARMACIST LICENSURE EXAMINATION COMPETENCY STATEMENTS

A critical outcome of the pharmacy curriculum and student education is preparation for and passage of their state licensure exam. In the new “blueprint AQ” that defines content for the North American Pharmacist Licensure Examination (NAPLEX) exam, there are now two broad areas (see below) being examined.10 Preceptor familiarity with the specific expectations by accessing the Blueprint online will help prepare both rotation students and employed interns to be successful in passing the NAPLEX exam.

- Area 1—Ensure Safe and Effective Pharmacotherapy and Health Outcomes (approximately 67% of test)
- Area 2—Safe and Accurate Preparation, Compounding, Dispensing, and Administration of Medications and Provision of Health Care Products (approximately 33% of test)

A similar blueprint for the Multistate Pharmacy Jurisprudence Examination can be found on the National Association of Boards of Pharmacy website.

CORE COMPETENCIES FOR INTERPROFESSIONAL COLLABORATIVE PRACTICE

The increased emphasis by ACPE on interprofessional education, noted previously (Standard 11), stems from recommendations by the IOM and collaboration between organizations representing health professions educators. Schools of pharmacy seek to define competencies and provide opportunities to achieve them within the didactic curriculum and during rotations. Preceptors should plan for increased interprofessional engagement during rotations.

More details about achieving the following competencies can be found in this docu-
ment endorsed by national associations representing educators from pharmacy, medicine, nursing, dentistry, and public health.11

- Domain 1: Values/Ethics for Interprofessional Practice
- Domain 2: Roles/Responsibilities
- Domain 3: Interprofessional Communication
- Domain 4: Teams and Teamwork

**ROTATION STRUCTURE AND EXPECTATIONS**

The remainder of this chapter will address how to effectively engage students during rotations to create a positive experience for both the student and preceptor. These same concepts apply to integrating pharmacy residents into your practice. Consider how you might enhance the experiences of employed interns. Whereas many interns start out performing technician responsibilities, they and you can also benefit by performing many of the same activities afforded to APPE students. We will suggest ways that preceptors can and should define routine expectations of rotation students. Just as pharmacy interns cover for technicians over holidays and vacations, so too can pharmacy interns sustain services normally provided by rotation students, such as medication histories and reconciliation, device training, patient counseling, adherence calls, etc.

**PRECEPTOR PEARLS**

Enhance the experiences of employed interns by integrating them into patient care activities and projects.

The structure of any rotation should consider four areas: orientation, learning by doing, feedback, and WIFM (“What’s In it For Me”). More suggestions on successful rotations are provided later in the chapter:

**Orientation.** Integration of the learner into the practice setting is essential and includes defining expectations of the student and preceptor(s)/staff, assuring site and school requirements are met, orientation and introduction to the site and staff, with access to resources and a schedule of activities and deadlines.

**Learning by doing.** Learners should be provided opportunities to engage in the practice to further develop their knowledge, skills, competency, and confidence. These can be routine daily expectations for patient care or team meetings, projects and learning activities such as topic discussions, journal clubs, patient education, or staff presentations. For early learners such as IPPE students, these would include more shadowing and performing technical or nonjudgmental tasks. For APPE students and especially residents, the learner should be afforded progressively challenging responsibilities with as much autonomy as the preceptor is comfortable with and the state legally allows.

**Feedback.** Just as important as the formal mid-rotation and final evaluation, is ongoing informal feedback from the preceptor. In addition to “on the fly” perspectives on performance and suggestions to improve that are provided to the learner by the preceptor, self-assessments by the learner, or peer feedback from others will enhance the learning experience. Before providing feedback on how well a patient interview went, consider asking learners how they thought they did and what they would do differently the next time. Reflective writing and journaling of activities provides additional feedback. Also, teach students and residents to provide constructive feedback to the preceptor regarding teaching style, designed activities, and the rotation.

**WIFM: What’s In it For Me?** As noted previously, precepting is itself a rewarding experience but also demanding. Later in this chapter advice is provided on how to integrate students and residents so they can become extensions of yourself, while having a good learning experience. However, think about ways you can personally benefit from the presence of a student or resident. Is there a longitudinal drug utilization evaluation or project students can work on? Do you choose journal club articles that you are familiar with or ones you hope to read in your spare time? Are there presentations on topics that students could research and present that also align with your professional or departmental goals, such as a new role for pharmacists or technicians or a new drug that a medical
colleague enquired about? Preceptors should not hesitate to create learning opportunities for students that also meet their own needs.

Preceptor: A Job Description

Whereas the state boards of pharmacy define the legal responsibilities of preceptors, and the colleges and schools of pharmacy define the educational requirements of the rotation, precepting requires many skills and traits that these formal bodies do not identify. Preceptors are responsible for the education of students while on rotation; ideally, this should build on the knowledge and skills learned in a classroom environment that increasingly includes simulation experiences and other active learning exercises to better prepare students for their rotations. Three of the most important areas of focus for preceptors include teaching students professionalism, effective communication, and applying the knowledge and skills they have gained from formal courses to real, dynamic patient care situations. To achieve this goal, preceptors must possess a set of core values, technical skills, and abilities.

PRECEPTOR PEARLS

Preceptors empower students to function independently and apply their knowledge and skills to real-life clinical and nonclinical situations.

Core Preceptor Values

The core values for a preceptor include the following:

- **Professionalism.** Students mature as professionals by observing practitioners in the experiential setting and by functioning as healthcare providers themselves. The most important person to instill this professionalism in students on rotations or as interns is their preceptor. To do so, the preceptor must exhibit professional behavior and discuss professional responsibilities and expectations of pharmacists with students. The preceptor should also discuss the different professional organizations with students and encourage students to become active members in these organizations.

- **Desire to educate and share knowledge and experiences with students.** Draw on your personal experiences. Help learners understand why something is important and develop the ability to navigate the process or ambiguity while evolving the “soft skills” to achieve success with others.

- **Willingness to advise, mentor, and provide valuable feedback and direction.** The progression of students from the classroom setting to experiential sites and, ultimately, to professional practice requires personal growth of the students. Preceptors must be willing to advise some students, guiding them along their path from student to pharmacist by helping them move from dependent learning to becoming a competent, independent, and committed professional colleague. This transition will prepare students for the lifetime learning model that all pharmacists follow. After rotations end, many preceptors maintain contact with learners evolving into a mentor/mentee relationship.

- **Willingness to commit the time necessary for precepting.** The majority of experiential rotations are supervised by pharmacists who are precepting students while performing their normal duties. Teaching while maintaining a full work schedule requires preceptors to have a true desire to teach and to commit the time necessary to teach. Precepting often requires a time commitment beyond normal working hours. Without the true desire to educate students and the willingness to devote the necessary time, preceptors will not be able to effectively teach their learners.

- **Respect for others.** Being a positive role model in how you engage colleagues, those in other health professions, and especially patients is critical to a student’s development.

- **Willingness to work with a diverse student population.** The student population today is more diverse than it was even 10 years ago. This diversity includes ethnic and gender diversity, along with
cultural and generational diversity. Many students today are entering pharmacy school after having worked for several years in another field, and some students already possess advanced degrees. There is also variability in student work experiences, career plans, and what they may view as important for their future. Although these factors will help strengthen the pharmacy profession in the future, preceptors must recognize and respect these differences. The degree of diversity that exists today also requires preceptors to adapt teaching techniques for maximizing students' learning experiences. When precepting multiple students on the same rotation, diversity factors can present unique and challenging situations.

Although each preceptor will have different areas of strength within these core values, the preceptor must hold each of these values as personally important.

In addition, precepting students on experiential rotations requires excellent skills in the relevant practice area. If a preceptor is not knowledgeable about a particular area, students will not gain the necessary oversight and guidance to meet their learning objectives. A rotation with an unprepared or inexperienced preceptor can also adversely affect the students' view of the profession. Preceptors should never be forced to take students on a rotation if they are not competent in that particular area. Sometimes, in an effort to schedule an experiential rotation for students, the site will try to accommodate both the students' and the college's needs. When this occurs, the site and preceptor almost always fall short, and the result is a negative experience for all involved.

Precepting is an additional duty that you undertake because you want to be involved in our profession's educational process. To be effective at balancing your job requirements with time spent teaching, preceptors must possess a number of abilities. They must have good written and oral communication skills, and good organizational and time management skills. Knowledge of resource utilization requirements of the site is also helpful in achieving the balance between the practice and precepting, potentially allowing preceptors to work within these resource requirements to involve others in the process.

**PRECEPTOR PEARLS**

A preceptor must have good communication, organizational, and time management skills.

**Why Being a Preceptor Is an Important Aspect of Pharmacy Practice**

Pharmacy is a proud profession with a rich history and many varied practice settings. The future of pharmacy will be determined by recent and future graduates. These graduates rely heavily on experiential rotations for developing their foundation and values in pharmacy practice today and what it can be in the future.

Each practice setting has unique experiences that can be utilized to teach students how to practice pharmacy in a real world environment. Through experiential rotations, students learn how to apply the knowledge they have acquired in their pharmacy school coursework. Students also learn how to be professionals and how to interact with other healthcare practitioners. Experiential rotations provide students with the opportunity to learn how to provide pharmaceutical care within various practice settings, while under the guidance of a skilled practitioner.

In addition to the value precepting has for the students, precepting rotations also provide value to the practice site. Hosting students on experiential rotations provides the site with an infusion of intelligent practitioners who help to keep the pharmacy knowledge base sharpened. Journal clubs and formal presentations provide pharmacy staff, both professional and technical, with up-to-date pharmacy information. Students who have completed interesting rotations also serve as positive advertising for the pharmacy among their classmates as they begin to seek employment after graduation.

Precepting is professionally rewarding for preceptors. They have the opportunity to influence future practitioners and, in doing so,
can influence the future of the profession for many years to come. Precepting helps sharpen preceptor skills, as they reinforce their own knowledge and expand their own horizons through student interactions. As preceptors answer questions and explain pharmacy practice, they gain an even deeper understanding of their own practice. Routine daily tasks that preceptors frequently do without much thought become fresh again as they explain them to students. Taking time to befriend students creates a unique professional bond that can last beyond the rotation period. It is not uncommon for former students to maintain contact with preceptors who helped to shape their professional perspective.

**PRECEPTOR PEARLS**

Precepting benefits both the students and the preceptor, who learn from one another.

Overall, when done correctly, precepting experiential rotations is one of the most important aspects of pharmacy practice. When the time and resources are devoted to making the rotation a top-notch experience, the students, the preceptor, and the site all benefit. Ultimately, patient care is improved—the reason we practice pharmacy.

**New Ideas for Seasoned Preceptors**

Seasoned preceptors often experiment with implementing new ideas and concepts into their training programs. This provides new challenges and excitement for preceptors as well as some new learning opportunities for students. Preceptors can either formulate unique and innovative ideas that are true revolutionary advances in student education, or they can simply add a different spin to the ideas and practices of others. This section of the chapter presents ideas that both new and seasoned preceptors can use to help students to become the best pharmacists they can be.

**PRECEPTOR PEARLS**

Incorporating unique activities into a rotation ensures that both the student and the preceptor remain engaged and committed.

**Creating a Practice Model**

Preceptors can create a practice model for students to effectively integrate with defined duties and responsibilities that are important functions and aspects of patient care and pharmacy operations. Often students do not have clearly defined roles at practice sites, and they are not well integrated into the patient care process or the pharmacy operations. Of course, it is hard for preceptors to essentially create an unsalaried job position and a job description for students if they do not have a constant supply of students. However, these barriers can be overcome and provide a dual beneficial experience.

Student intern positions are typically salaried with shared components of both technician duties while focusing and authorizing some clinical and pharmacist level activities. For optimal integration, duties and responsibilities would have to be filled year-round to provide consistency and continuity of services, especially if the students are integrated into a patient care unit and team in a hospital. When expectations of other health-care professionals have been established and met by students providing them support for patient care services, there cannot be lapses in coverage. The practice site will need to always have a student in that position. This will require a strong partnership with one or more pharmacy schools in order to meet the site’s demand for students. Attraction of these students for employment can provide additional benefits supporting the student’s individual development through scholarship activities that are more thoroughly denoted later in this section as well as development of mentorship, curriculum vitae review, mock interviews, and other preparatory activities.
The skills learned and practiced as student interns complement those training skills taught and evaluated during rotations. While under the supervision of a pharmacist preceptor, students can be decentralized to a patient care unit or to a team in a hospital and provide a spectrum of pharmacy services (in accordance with individual state laws). Students can be responsible for a number of functions, including taking initial medication histories, conducting daily drug regimen reviews, answering drug information questions, restocking and delivering medications, performing therapeutic drug monitoring services, writing patient care plans and daily progress notes, reviewing discharge medications, counseling patients, and providing in-services to the medical, nursing, and allied health staff. Students also could act as liaisons for the pharmacy department and help nurses on the patient care units and centralized staff pharmacists troubleshoot problems with the medication-use system (prescribing, dispensing, administration, and monitoring). Utilization of learners as extenders is an adopted concept in many settings and even referenced in the ASHP Pharmacy Practice Model Initiative. This includes responsibilities for patient care activities, including documentation in the patient's medical record.\(^{12}\)

Although the above example is for creating a student practice model in an inpatient setting, student practice models related to patient care services outside the hospital environment or within pharmacy operations and management could be developed in many other pharmacy practice settings and include similar activities as noted above. Whenever possible, preceptors should get senior students involved in more advanced practice activities (as permitted by state law) and involve other professionals (e.g., physicians, nurses, dieticians, respiratory therapists, business managers) in their internships as co-preceptors to provide more diverse education and experiences. Advanced practice activities can include disease screenings, patient assessment (physical examination, laboratory test interpretation, etc.), medication administration, drug therapy and disease management, patient counseling on health promotion/disease prevention and on their specific diseases and medications, and practice and financial management. In addition, students could act as teachers by providing in-services to other healthcare professionals and educating support groups about drug therapy and disease management. Teaching is a very effective way to ensure a full understanding of the material.

Other suggestions on how more seasoned preceptors can engage and further develop students, interns and residents include the following:

- Evolve a project to the point where you and the learner can present or even publish the results. Students require introduction to scholarship activities and with proper direction and oversight provided can contribute extensively in progression of projects that are mutually beneficial. Medication-use evaluations are a focused and often student level project but can easily be expanded to research, performance improvement, and even policy or procedures documents. Additional opportunities could remain within the institution or work environment serving as an educational or communication tool. Articles written for department newsletters, contributions to website blogs, and co-writing short works for a consumer site are all examples of scholarship that can be fulfilled by a learner. Preceptors can archive these documents so that future learners can review and learn from them as well.

- Teach APPE students to oversee IPPE students and residents to supervise APPE students. As requirements change for IPPEs, innovative methods to expose students to rewarding learning environments need to be explored. One of the most commonly cited interests of students is serving as a future preceptor. This is a skill that can be taught but needs to be practiced, adapted, and continually evaluated. It serves all parties well to provide students with an environment to precept with a supported structure and feedback regarding their designed experience. This is easily incorporated as a resident rotation, when learners are provided an opportunity to design an experience and practice precepting with
oversight and timely feedback. This translates to all practice environments but is underutilized.

- Encourage attendance at professional meetings or serving with you on a committee. Most preceptors are attempting to foster the ambition of future leaders, innovators, and practice changers. Allowing students and residents to participate early on in organizations is a great introduction to the process. Due to the design of some national and local committees, it may not be possible for learners to be an active member of a particular committee. Consider allowing them to listen to a conference call or attend a meeting as an observer, then discuss the topics debated or support their interest to enlist at a student- or resident-level committee. Students are curious about how a pharmacist spends time during the day, so bringing them to departmental, institutional, or small work group meetings will help outline some of the responsibilities that need to be balanced daily. It also teaches them a different perspective of our profession.

- Attend student meetings or workshops on campus where you can share your expertise and experiences with multiple students. It has become commonplace to have question and answer sessions reflecting the various roles of pharmacists. For some, courses have been developed focusing on residency preparation with classes or small group discussions dedicated to successful interviewing, designing a competitive curriculum vitae, or scholarship activity collaborating on publishable projects. Regardless of the role, participation demonstrates your vested interest and opens opportunities to serve as a mentor.

- Develop a library of commonly used references and resources by having students review and update the content during rotations.

- Perform institutional audits or evaluations that may not be publishable but can improve safety and benefit the institution. Examples could be evaluation of PRN (as needed) medications to ensure that enough detail is included to define their use but also to minimize any overlap in coverage with medications such as pain regimens. Another example would be interviewing patients about their understanding of medications that likely would involve scripting and (depending on state laws) may not be conducted at all.

- Encourage students to document activities in the medical record. Depending on state law and institution-specific rules, if students are permitted, they should be encouraged to document. Medical writing for the purpose of communicating medication information via a patient’s medication record is a taught skill. Documentation includes activities such as medication history clarifications, full subjective-objective-assessment-plan notes with interventions, simple recommendations focusing on a single disease or medication, pharmacokinetic notes, and (most commonly) documentation of patient/family education.

- Request that students provide feedback regarding the rotation on a weekly basis and honor the suggestions made by implementing change. This helps keep the rotational experience fluid and contemporary while still dedicated to students’ needs and style. Adaptation is important, but the core of the rotation and its learners should remain stable.

**Portfolios**

Some preceptors require students to assemble a portfolio during their rotation that documents their achievements and reflects their competency as demonstrated during the rotation. Schools of pharmacy are increasingly requiring this of their students and it can serve as a wonderful example of work during interviews. This is consistent with the movement in healthcare to better assess the competency of students, residents, and practitioners with the ultimate goal of improving patient safety and outcomes (clinical, economic, and humanistic). Competency is difficult to assess because it is composed of multiple domains, including knowledge, skills, abilities, values, attitudes, beliefs, and behaviors. No single evaluation method (e.g., examinations,
assignments, direct observation, etc.) can be used to accurately and appropriately assess competency in all of these areas. Competency assessment really requires the use of a variety of methods and instruments.

A comprehensive competency portfolio may have some similarity to a diary (e.g., reflective writing on feelings and experiences) and also to a promotion or tenure dossier of a faculty member (e.g., demonstration of activity and achievement in certain areas, including practice, teaching, research, and service). Of course, the first step is to define the desired areas of competency for students. Preceptors should check with their respective academic programs to determine if the programs require identification of the desired areas of competency. The pharmacy schools with which preceptors are affiliated should have already done this. If not, preceptors can take the lead and develop a set of activities that allow students to demonstrate competencies that they expect students to have after completion of their rotation or internship. Students can demonstrate how each competency has been attained through a variety of documents in a competency portfolio as well as by doing self-assessment and reflective writing related to each competency.

Integrating Pharmacy Students into Your Practice

Pharmacy education in most practice settings is characterized in part by balancing educational effectiveness with optimal patient care. As practitioners, we are all juggling multiple tasks and responsibilities while teaching and supervising students and, for some, residents. Time constraints and multiple pressures and deadlines are all factors. The constraints associated with high census, high volume, high patient acuity, clarifying prescriptions or medication orders, dealing with insurance problems, and staffing shortages complicate being an effective preceptor. There are educationally sound methods that incorporate time management, organizational skills, service learning, and effective planning to assist preceptors in integrating pharmacy student education and meeting employment and practice requirements.

Orienting Your Students

Be prepared when students arrive at your facility or practice setting. Students appreciate structure, and it provides them with the opportunity not only to meet all learning objectives but also to be trained and participate in services and activities that are unique to your practice setting. As the preceptor, you will be able to teach in a more productive manner and allow the students to have effective patient encounters with appropriate education, guidance, and supervision.

Begin by developing a detailed syllabus or training manual specific to your facility and experiential rotations. This demonstrates to the learners your commitment to their education and training and provides an outline of expectations. Revisit the syllabus weekly to ensure that timelines and tasks are on target. Part of a syllabus could be to request learners to define their personal goals for the experience. At this point, their personalized goals need to become actionable items evaluated on a weekly basis to ensure that all parties are engaged and productive in achieving the desired outcomes. This should be a formal process and should include encouraging students to provide feedback.

Be sure to orient students to their new temporary environment; this sets the foundation for a successful integration into practice. Remember that students are changing practice areas frequently and accommodating various expectations. This initial orientation and introduction can aid in a more rapid assimilation to the new site. Include not only information about the pharmacy and the experiential rotation but also about your hospital, community pharmacy, ambulatory care site, specialty site, or other practice site or facility. Do not forget to include a map of your facility, especially if it is a large teaching or community hospital. Tell the story of your institution. How did it come to be? Include organizational maps of the hospital or practice site and of your department. Insert a copy of your job description as well as other position descriptions that may be of interest. Students who have never worked in a pharmacy or seen a pharmacist in clinical practice are often surprised at the extent of duties and responsibilities and the creative practice structure of
pharmacists in today’s health system, community practice, ambulatory care, management, and other professional practice environments.

PRECEPTOR PEARLS

Providing students with a detailed training manual or syllabus on their first day orients them to the site and demonstrates your commitment to their training; obtaining personal goals and objectives personalizes the experience.

Orientation is a well-recognized strategy for creating a positive learning experience and communicating goals, objectives, and minimal competencies for the experiential training rotation.

Orientation should include the following:

• Goals, objectives, and minimal competency requirements of the rotation
• Rotation hours and attendance policy
• Any requirements of the student during off-hours
• Regulatory compliance standards relating to your state board of pharmacy
• Tour of your facility and department
• Review of required readings for the rotation
• Terms and definitions for students completing a rotation in an unfamiliar practice setting
• Issuing an identification badge and computer access codes
• Facility orientation requirements (e.g., infection control, Health Insurance Portability and Accountability Act)
• Introduction to members of the department or practice and a brief explanation of their duties
• Introduction to key members of the medical, nursing, and other health professional staff or store or office manager with whom the student will be working with daily. In a community setting, it is helpful to include a list of the top physician prescribers
• A review of the facility’s policies and procedures
• Introduction to your pharmacy information system and insurance adjudication system
• Introduction to your site’s drug utilization review process
• Introduction or review of your facility-specific medical record system or patient information system
• A list of your community practice’s “fast movers”
• Review of all pertinent medication-use policies (e.g., standard administration times, approved abbreviations, and substitution guidelines), including how errors are handled
• Publications, journals, and other reference materials available to students
• Evaluation instruments, timing and methods, and grading policy

Familiarize Yourself with Your Students’ Experiences and Goals

Familiarize yourself with students’ prior rotations, experiences, and professional goals. Ask for a copy of their CV and review professional engagement and accomplishments. Review work from previous rotations if the school mandates and makes accessible the student’s portfolio. Consider having them complete a quiz on first day so they know what you expect of them and you get a sense of their preparedness. You can repeat a similar quiz on the last day so they can see how much they have progressed. Providing reading assignments prior to and during the rotation helps get them up to speed and to know your expectations.

Assess the students’ areas of interest. Determine their short- and long-term goals on the first day of the rotation. Let them know that the schedule is flexible enough to allow for their involvement and input into planning their daily activities. Assess their readiness and motivation to learn and how they learn best. Ascertain if they have previous experience working as a pharmacy intern either in the hospital or community pharmacy setting or possibly in a non-traditional setting such as home care, managed care, or the pharmaceutical industry. For example, students may have prior experience working as an IV technician.
in a health-system setting. You may choose to perform a validation of their skills and then take the time normally assigned to that activity and change it to an area of particular interest to the students or on a special project or assignment. A student who has worked as a technician in a community setting may have a comfort level with insurance adjudication and could work on health screenings and intake information projects instead.

You will need to devote a significant amount of time the first week of the rotation to setting requirements, modeling of expectations, and establishing ground rules. By ensuring that students have a full understanding of your expectations, there is less of a chance for misinterpretation or confusion later. This makes for an easier transition to empower students to take on projects and be more independent as they move throughout the remaining weeks of the rotation, with ongoing supervision and follow-up from the preceptor. The concept of students functioning as extenders to practice and not observers needs to be established as an expectation. Many students struggle with their role, and this permission is necessary.

**Building the Schedule**

When building the schedule for the rotation, include time for preceptor teaching and feedback as well as time for the students to reflect on their patient encounters, experiences, or projects they complete, and unplanned events that enhance an experience. Be sure to include dates for midterm and final evaluations, site-specific and school events, holidays, and assignment due dates (e.g., case presentations, journal club, patient care plans, and a project where the patients or the site are sure to benefit and students experience success). Be sure to communicate your specific expectations to students.

Capitalize on the advantages of your practice site and your strengths as a preceptor when developing student schedules. Assign special projects and presentations that will benefit both the site and students. Include patient education, literature searches, physician case conferences, morbidity and mortality rounds, pharmacy and therapeutics or formulary meetings, grand rounds, and health screenings and immunization opportunities in community and ambulatory opportunities as part of their experiential training. As you review the schedule with students, be sure to allow them time to ask questions and take time to explain to them how all the activities impact patient care.

Supervise the project with frequent checkpoints or spot validation of data being collected. Use the opportunity to discuss time balance with integration of scholarship works or institution-requested projects with patient care or other daily activities so that students have a full appreciation for the value of the work that they are doing. Ensure that they understand how being an extender differs from busy work, which has little value for the institution or student.

Allow for student individuality and creativity. Make provisions in the schedule to allow for activities that meet specific student needs and desires. Assess their strengths and weaknesses and allow enough flexibility to meet their educational needs and interests. If you develop a project encompassing some of their interests, they will be more motivated to perform those activities that are less interesting as well. Be flexible and try out new concepts or ideas. Most importantly, identify opportunities for student involvement when considering any and all of your planned activities.

Preceptors must keep in mind that more than anything else students want to spend quality time talking with and learning from them. Often because of the hectic nature of many practice environments, preceptors are not able to spare much time during the workday to do this. Do not hesitate to allow students to accompany you to departmental meetings related to their experience. They may help a student learn and appreciate the discussions that happen prior to practice changes or decisions. Meetings also serve as an opportunity for conversation about time management, including balancing and prioritizing daily activities. A practice model needs to be established that extends beyond only observational experience. Students are engaged and empowered when they are provided tasks that designate them as extenders to practice.
Standardize your time during the workday to meet and discuss related topics.

**PRECEPTOR PEARLS**

Use their experiences, goals, and interests to help tailor rotations to individual students.

*Establish Standards and Set Expectations*

Students generally progress through predictable stages of learning development. It is critical to the success of the rotation that preceptors take time on the first days of the rotation to assess each student individually. This exercise should not only determine students’ basic pharmacological competency and core clinical and patient encounter skills but also verbal and written communication skills, problem solving skills, ability to perform multiple tasks, and ability to handle complex patients. As a preceptor, you should be able to rapidly identify student strengths and needs relative to meeting all the learning objectives of your rotation. Have a plan, but be flexible in adjusting it to meet student needs and abilities.

The first meeting with your students sets the tone for the entire training encounter. Ensure that students understand and accept that both of you must work together throughout the rotation to ensure quality patient care as well as quality education and training. Identify what your students can do or recommend independently versus when they need you to review, approve their plan of action, or observe their engagement with a patient. Documentation of activities demonstrates to students their influence as a contributor to the medical record, whether documenting a full clinical note, pharmacokinetic note, or educational activity. All will need to be co-signed after full review by the preceptor. This activity may easily increase an individual preceptor’s documentation practices through cosigning learners’ contributions. As you gain confidence in their abilities, provide them with increased autonomy and responsibility as legally appropriate.

To have a successful experiential rotation, it is essential that the preceptor establish standards. Be specific when you communicate your expectations to students. Offer ideas as you mutually establish specific goals for their rotation. Give them creative challenges; promote their strengths. By linking the students’ performance to those standards, the preceptor creates a benchmark for achievement. The ultimate goal is to transition from a teacher/student learner relationship to clinical supervisor/responsible performer (clinician) relationship. Students should be able to demonstrate their problem-solving skills and integrate their didactic knowledge and clinical training to real-life situations. There should be a good balance between education and service learning. Model the desired activity and then have student practice with you. Afterward, shadow them in the actual activity and provide immediate feedback; repeat this until the learner has shown competency in performing the activity independently.

**PRECEPTOR PEARLS**

Establish standards and communicate them clearly to your students.

A good preceptor should be able to relate to students how all their activities impact patient care. Preceptors should provide guidance, answer questions, explain answers, and assist students in developing self-confidence and self-esteem. An exemplary preceptor demonstrates a positive attitude and is dedicated to helping students achieve their full potential.

Most experiential training sites afford students the opportunity to work and train with a number of other professionals besides the primary preceptor. Choose professionals who are motivated and committed to student education. The pharmacist team of preceptors can teach students a number of critical skills that are not necessarily related to the science of pharmacy but rather the human side of our profession. Students will be able to observe the various healthcare professionals’ different approaches. Some of these critical skills include ethics, teamwork, leadership skills, empathy, compassion, communication,
as well as the technical and cognitive abilities of being a pharmacist. Introduce diverse activities that provide students with the opportunity to meet all learning objectives while meeting work requirements.

**Be Organized and Manage Time Effectively**

To simultaneously provide a successful educational experience and ensure clinical effectiveness, the preceptor must be organized and must identify strategies for providing educational opportunities. Orienting students to patient encounters is an effective strategy for creating a good learning environment and providing effective direct patient care. Learn to present a 1- to 2-minute patient-specific presentation. This will help learners efficiently interpret vital patient information. For example, the preceptor should review the patient's medical background and explain to students which symptoms or conditions they should focus on and how to look for nonverbal forms of communication by the patient. Establish guidelines for interventions, monitoring, or a patient care plan. Another example would be going over with students the importance of calling a physician if they are unclear about a prescription, the steps to take if they come across a drug interaction, or how to negotiate with or talk to an angry patient or physician. During each patient-specific encounter, the preceptor should alert students to any potentially coexisting problems or additional medical conditions in the patient’s history.

Time management is a skill that also should be taught to students and protected by preceptors. If students are appropriately oriented, they can expand the reach of the pharmacist through planned activities. Concepts such as the “One-Minute Preceptor” can be used. This involves weekly discussion topics related to patient cases and other learning opportunities. Students who are able to perform medication histories and documentation of these activities can enhance the impact of the department as a whole. Documentation of clinical activities, such as education, pharmacokinetics, and even progress notes is another effective way that students can be integrated into practice, provided it is completed in accordance to individual state laws and co-signed by a licensed preceptor. As pharmacists pursue provider status, objective activities such as documentation of clinical interventions, education, and other topics address necessary skills in time management and improve communication skills.

The patient case presentation or the drug utilization review process offer both the preceptor and students an optimal opportunity for teaching and learning. In addition, teaching with the patient allows the preceptor to observe students’ performance and enable them to provide immediate feedback. The preceptor should verbally identify what students did well, and then ascertain opportunities for improvement and suggest steps students might take to correct them, without dictating a solution, even if it seems obvious.

**Box 1-2** lists some examples of effective opportunities to teach in a productive manner. Presentations do not need to be limited to preceptors, other pharmacists, or peer students. Students are effective educators with appropriate oversight and learn from educational sessions provided to other multidisciplinary groups such as nursing inservices, provider or physician medication pearls, as well as patient or consumer education.

Remember that students should be active participants. The preceptor must take care not to make any pertinent learning activities a shadowing experience unless he or she is precepting an introductory pharmacy practice experience. Students should know the reason or rationale for all activities or projects.

**Promote Learning**

Promote self-directed and life-long learning. At the end of the day, ask the student, “What did you learn today?” or “What medical problem or condition would you like to learn more about?” or “What was the most important thing you learned today?” Link self-directed learning to a recently observed patient problem or departmental process or procedure. Self-directed learning can also include research, literature review, or selected reading about a disease or condition that is prevalent in the patient population you
serve. Self-directed learning should apply the students’ didactic knowledge to real-life patient encounters or experiences.

Service-based education is a very effective teaching tactic. There are two ways a preceptor can use this teaching strategy. The first is by identifying to students the tasks that are routinely performed by nonlicensed staff in your department or other health-care providers. The second is by encouraging students to participate in community service-based education.

Nonlicensed staff are an integral part of the daily operation of a pharmacy. To help students comprehend and appreciate how each employee is a valuable member of the pharmacy team, allow students to spend some time with the support staff within the department. During institutional and community rotations, have them perform duties such as triaging patient or nursing phone calls, assisting at the service window, calling insurance companies, retrieving charts, repackaging medications, calling physicians to clarify orders, and assisting in the ordering and inventory process. It is also important for students to learn how these functions are critical to the operations of the department.

**The Value of Community Service Education**

It is also imperative that students learn the value of community service education as part of their experiential training. Start by inviting them to go with you to one of your local pharmacy organization’s continuing education programs. Teach them the value of fellowship and networking with colleagues within your community.

**PRECEPTOR PEARLS**

Teach students the importance of community service.

If you are actively involved in any volunteer community activities, such as local health fairs, providing healthcare to the homeless, serving food at local shelters, or volunteering at a clinic for indigent families, invite the students to go with you. Alternatively, develop a community service site directory and let students choose where they would like to visit. **Box 1-3** lists examples of good learning environments for students. Give them specific goals, such as learning about topics listed in Box 1-3. Also give them observation questions or assignments. Help them to see the “big picture” of healthcare as well as the specifics of patient care. **Box 1-4** lists some examples of these questions and assignments.

The most useful activity after community service education is reflection. Focus on a teaching point, such as whether the student effectively addressed the patient’s concerns. The preceptor should provide meaningful feedback and ask if the expectations were realistic and reasonable for the student.
goal is to help students realize that the contributions they can make go beyond the workplace environment. The professional rewards of the service-oriented teaching are great, and students recognize the value of intrinsic rewards such as personal and professional growth and development (see Box 1-5).

Schedule Time for Feedback and Assessment

Find opportunities to ask students questions about their learning experience, such as times when you are both on break. Provide frequent assessment; informal assessment should be ongoing throughout the rotation. In your informal conversations discuss issues such as lifetime learning habits, the role of residency training, balancing career and family goals, applying for a job, and interviewing skills.

Sit down with students at least once a week to provide formal feedback and assessment. Review the progress that they have made and give them the opportunity to come up with ways to improve. Be candid. Provide honest and constructive feedback. Listen carefully to students when you ask them for their self-assessment.

**PRECEPTOR PEARLS**

- **Provide frequent, specific, and constructive feedback.**
- **Acknowledge student contributions in front of other members of the healthcare team or during departmental staff meetings.** This will go a long way in helping build self-esteem. Help them promote their strengths and teach them to assume broader responsibilities in meeting their educational goals.
- **Do not forget to bring in some real-life experiences.** Tell them about your preceptors and mentors and the influence they had on your life. As much as possible, be accessible and approachable to the students.

**Fostering Successful Scholarship Activities**

Preceptors should encourage students to present and publish their work on projects or their opinions on issues. Presenting and publishing (papers, posters, and abstracts) are excellent educational activities, and they also bring recognition. There are numerous oppor-
tunities for students to present (e.g., local, state, and national pharmacy society meetings, community organization meetings) or publish (e.g., employer or professional society newsletters, local and national newspapers, state and national pharmacy society journals) their work or opinions. Often, students are required to complete a project (e.g., research, process improvement, community service, etc.) or an assignment (e.g., formulary monograph, therapeutic review, etc.) that they could present or publish in a variety of forums. Also, students sometimes see patients with significant clinical findings that are either unusual or new and not previously reported, which they could write up as a brief case report. They can submit their thoughts on issues as viewpoints, opinions, commentaries, or letters to the editor to many newsletters, newspapers, and journals. Author a review article for a newsletter or journal based on background research they have done while supplying evidence-based pharmaceutical recommendations for patient care problems, the development of policies and procedures, or the conducting of formulary evaluations. Overall, writing articles of any type can reinforce learning, enhance written communication skills, and stimulate students to clarify their beliefs and positions.

**Professional Societies and Community Service Organizations**

Preceptors are often involved in professional societies and community service organizations, which provide an excellent opportunity to get students involved. Many professional societies utilize conference calls during the workday, and it can be a relatively easy opportunity to have a student sit in and listen and possibly participate in the conversation. This demonstration of how to balance patient care responsibly for conflicting daytime activities while engaging students with the preceptor’s passions is an important skill to observe and master. Live conferences provide an excellent networking opportunity to excite student learners. Most people want to feel needed and engaged in the activities that provide positive affirmation of the contributed time and activities; this can be demonstrated to students by involving them in those activities. Community service can be provided in numerous modalities, and students should be exposed as much as possible. Confidence, social interaction, communication and information sharing can be taught during these activities. Participation in professional societies and community service organizations is critical to becoming a professional and provides one of the best opportunities for leadership development.

Preceptors should not give students compensatory time off during the workweek for attending evening and weekend professional society and community service activities. Preceptors do not get compensatory time off from work for these activities, nor should students. This is part of the students’ learning about public service, the advancement of pharmacy practice and patient care, and lifelong learning. Some colleges of pharmacy recognize attendance of outside professional organizational meetings as “special activity hours” and give credit for these during the rotation.

**Summary**

There are an infinite number of concepts that add value to a student-focused practice model and make the educational process more meaningful to both preceptors and students. It is important for preceptors to keep themselves challenged and energized about precepting students. Experimenting with ways to add new dimensions to student involvement or to completely reinvent internships can be therapeutic for preceptors and can create new and better learning opportunities for students.

Both the preceptor and the students must be committed to patient care and to pharmacy education. The preceptor must consistently demonstrate competency and professionalism and have a passion for education, service, and excellence. Consistency and standardization are essential for effective teaching and integrating pharmacy students into your practice. Effective planning, comprehensive student orientation, setting clear expectations, introducing diverse learning experiences, and ongoing constructive feedback are integral to the students’ successful learning experience.
References