

Introductory Institutional Pharmacy Experience

PHARMP 531–533

Guide

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Updated April 14, 2019

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Chapter 1: General Practicum Information

Introduction

Welcome to the Institutional IPPE, the second of the introductory pharmacy practice experiences (IPPEs). Students will in this experience be spending time in a hospital pharmacy and will gain skills and knowledge needed by pharmacists and technicians who practice in the hospital environment. This experience is only possible through the hard work and dedication of preceptors who volunteer their time for the advancement of student knowledge. The School of Pharmacy is deeply thankful for this commitment and dedication.

As always, if you have questions or concerns, email (preferable) or call us. You can direct your inquiries to the following people:

Questions about site placement, deadlines, forms, entry codes, rules, record keeping, and anything that doesn't fall clearly under the categories listed for people below:

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Chapter 2: Basic Course Information

Course Description and Goal

The goal of this course is to introduce students to what pharmacists do in the hospital practice environment. Expect to spend at least 120 hours on this learning experience. Students will spend the majority of class time for this course at a practice site, where you will work with pharmacists, technicians, other health care practitioners, patients, and on their own. The amount of time each student needs to spend on each Objective will be primarily determined when the student and preceptor feel the student has moved beyond the novice level.

Course Schedule

Class meetings/seminars are scheduled in advance and required for all students. In these seminars, students will be oriented to expectations and logistics for the course series as well as needed information for success in the practice setting. These seminars help students prepare for accomplishing specific competencies (learning objectives) as well as provide time for reflection and discussion once they are completed. Specific training (blood borne pathogens, first aid, fraud/waste/abuse, etc.) necessary for entry to the patient care setting will be provided. Guest speakers will augment selected topics and skills where relevant to bring perspective and relevance to the student pharmacist. All competencies must be completed and submitted before the end of 3 business days after the completion of the IPPE. This course series orients students to institutional practice, fulfills requirements for entering patient care, and sets expectations for the course series.

Registration and Deadline for Submission

PharmP 531, 532, and 533 are each 1-credit courses. Students should register for these courses just like any other course in the curriculum. Students must meet the requirements for attendance and paperwork submission as scheduled in each of these quarters to receive a grade. The course is graded “credit” or “no credit.” A “no credit” will be given to students who fail to complete the experience on time, and they will not be permitted to participate in subsequent IPPE and APPE coursework.

Preferences/Placement

The autumn quarter before the IPPE experience is when the placement process begins. Early in autumn quarter students are asked to submit their preferences for placement and at the same time the IPPE Coordinator asks sites to submit their availability. Placements are made by the school and then released to the students before January. Since the school recognizes that plans can change or students can move, there is a petition process for students to submit concerns about their placement. The petition is there to give students the opportunity to express why they cannot complete their IPPE at their site; it is not a request to be moved to another site in particular. Once the petition process is complete, sites are informed of who their students are for the year.

IPPE Time Frame for the Novice IPPE Student

For the most part the Institutional IPPE is a full-time experience that occurs over the summer. Students should anticipate completing their IPPE over the summer and occasionally students may complete their IPPE in spring quarter as a part time experience. While the school will work to try to accommodate international opportunities and other professional development activities that take place over the summer, a student’s IPPE takes priority over other elective experiences.

IPPE Time Frame for the Advanced Beginner IPPE Student

Advanced beginner students are those students who choose to complete their IPPE within the same health system as their internship. These students are considered advanced beginner students since they have been exposed to the inpatient setting and have already been exposed to many of the competencies before as part of their internship. With the knowledge of their health system these students should be able to quickly

complete most of their competencies and then spend the rest of their 120 hours working on a project as outlined in 5b. In spring quarter advanced beginner students will be required to submit a project plan. Based on feedback from the sites, advanced beginner students may work on their IPPE throughout spring quarter and summer, or there is also the option to complete the IPPE in a full time 3-week block. The Institutional IPPE is a total of 120 hours, whether it is completed in 3 weeks of full-time work or spread out over a part time experience. All competencies and preceptor evaluations are due before the end of summer quarter.

An advanced beginner student may choose to complete their IPPE with a health system that is different than the health system they work in as an intern. However, they will then be considered novice IPPE student since they will have to become oriented to general structure and workflow of the new health system.

Due Dates

All students must complete their competencies within 3 business days of finishing their 120-hour experience, however it is ideal for students to complete their competencies before they leave their site. For advanced beginner students the competencies must be complete before the first day of fall quarter. If the student does not complete their competencies on time, the student will receive an incomplete for PharmP 531 and their credit for 531 will be at risk.

While we know that it can be a lot of work, **we ask that preceptors evaluate their student's work within one week of the student finishing their competencies.** This way the student receives feedback on their work while it is relevant to them. **However, all competencies must be evaluated by October 1, 2017.**

Prerequisites

Before a student is allowed to come to the practice site to learn, we require him or her to do the following things:

- Obtain an intern license from the state board of pharmacy.
- Complete the UW Medicine Health Insurance Portability and Accountability Act (HIPAA) training.
- Agree to abide by our guidelines for professional conduct.
- Under the Affordable Care Act, starting January 1, 2014, most Americans will be required to have health insurance or pay a penalty. This is called the "Individual Mandate." To avoid the penalty, students need insurance that qualifies as Minimum Essential Coverage. The practice of pharmacy has inherent risks in working with patients with communicable diseases including accidental exposure to blood-borne pathogens. Injuries, accidents or illness can occur in your personal and professional life. Emergency first aid, laboratory testing, medications, hospitalization and other treatments may be necessary. If a student does not have health insurance coverage, they may be subject to pay a penalty and still be responsible for the 100% cost of medical care. Further, it is becoming increasingly likely that students will be asked to provide proof of health insurance by a site before they are allowed to begin an IPPE or APPE. For these reasons, students are responsible for obtaining health care coverage for themselves (and their family, if applicable).
- Ensure compliance with all required immunizations (by the UW student immunization specialists) and obtain documentation of compliance.
- Become certified in CPR for the Professional Rescuer, and First Aid. Training must meet the American Heart Association standards
- Complete and pass the pharmacy practice skills course series (PHARM 593), which is designed to introduce the students to some of the skills they will hone at their IPPE sites.

Course Learning Objectives and Competencies

By the end of this course series and practice experience your student should be able to:

Objective 1: Distinguish the current and expanding interprofessional patient care roles of pharmacists in institutional practice.

Competency 1a: *Determine the patient care role of pharmacists at the site.*

Competency 1b: *Analyze a patient's medication list.*

Competency 1c: *Summarize how medication-related information is obtained from patients on admission*

Competency 1d: *Explain how medication-related information is given to patients during hospitalization and upon discharge.*

Objective 2: Provide appropriate information about medications.

Competency 2a: *Identify drug information and other information resources available to pharmacy personnel at the site.*

Competency 2b: *Accurately respond to a drug information request from a patient or health care colleague using language appropriate to the person requesting the information.*

Objective 3: Identify correct procedures for product distribution in an institution.

Competency 3a: *Describe the steps in processing new medication orders at the site.*

Competency 3b: *Prepare in advance prescribed routine medications for individual patients.*

Competency 3c: *Distinguish the process for supplying floor stock to patient care units.*

Competency 3d: *Accurately prepare sterile products using proper aseptic technique in a timely manner.*

Competency 3e: *Confirm accuracy of product preparation by other pharmacy personnel.*

Objective 4: Accurately and in a timely manner perform calculations used in institutional pharmacy practice.

Competency 4a: *Demonstrate accuracy and timeliness in the mathematical computation of ingredient amounts, doses, infusion rates, or other relevant calculations.*

Objective 5: Participate in the management of medical product distribution and other health system operations that control quality and cost of care.

Competency 5a: *Describe how drug therapy gets from the pharmacy to the patient and identify opportunities for error in the administration process.*

Competency 5b: *Describe the steps in the processing nonformulary drugs.*

Competency 5c: *Distinguish the role of The Joint Commission on health care in the institutional setting and how it impacts inpatient pharmacy practice.*

Objective 6: Display professional behavior and a willingness to problem-solve.

Competency 6a: *Be prompt, and appear neat and cheerful, display a positive attitude, adjust adequately to new or unexpected situations, and display a willingness to work in a collegial fashion with pharmacists, technicians, and other health care practitioners.*

Objective 7: Conduct a clinical patient interview.

Competency 7a: *Gather and evaluate data for a real patient to identify medication-related issues.*

Competency 7b: *Using the information gathered from the patient interview, present a case presentation and create a plan for one drug related problem related to this patient's case.*

Objective 8: Design a quality measurement project

Competency 8a: *Design a quality measurement project that could be of value to pharmacy management in an institutional setting.*

How Competencies Are Certified

Students will need to obtain an electronic “signature” from their main preceptor or another qualified preceptor for each competency, once a preceptor feels that the student has met the description as outlined in the “task” and “measurement” for that competency. Verifying and evaluating each individual competency is laborious for preceptors, but the trade-off is that preceptors can choose which competencies to focus on (and then “sign off”) at specific points in time. Targeting focus areas at specific time period enables preceptors develop a learning curriculum for the student that is tailored to the practice site.

Designing a Learning Plan for a Student

Initially, please use the learning objectives and competencies only as a general guide for structuring learning activities. For example, preceptors know that the student will need to spend time learning how orders are processed, drugs are prepared and distributed, and what safety checks occur during this process. Preceptors may then have the student spend a week or two with a technician who enjoys working with students to first observe and then to assist the technician in his or her tasks. Preceptors will ensure that the technician knows the different tasks that the student needs to learn and master.

Orientation: It will work best to train the student the same way any newly-hired intern would be oriented. Don't worry about signing off any competencies for the first part of the training process but instead train the student in the workflow procedures as soon as possible. Start with training elements that will not interfere with the workflow but will help the student begin to grasp the rudiments of how to respond to common situations. A training module that is off-line and designed to orient new personnel to the computer system would be ideal, then move the student to shadowing and then beginning to perform the procedures, preferably at times where the site is least frantic. It would be good to have the student spend a couple of minutes at the end of each training day summarizing things learned or honed during that day.

Put it on Paper: Once there is a plan in mind for training, put it on paper. An activity calendar will make the preceptor appear more organized and welcoming to the student. Try to schedule some discussion time into that calendar so that the preceptor can regularly check in with the student to determine how things are going from the perspective of the student. Preceptors can also discuss with other people involved in training the student how the student is making progress toward working without overt guidance. As always, remind other staff members to discuss student progress only with people involved in the student's training, not with individuals who are not part of the training process.

Expectations of Preceptors

1. Orient student to practice site (i.e., schedule, responsibilities, workflow, parking, evaluation)
2. Be familiar with the required competencies for PHARMP 531-533.
3. In collaboration with the student and the practice site demands, establish a plan for the experience that assures the student is able to complete the required competencies.
4. Monitor student progress in accomplishing the competencies making sure all of them are completed.
5. Regularly assess student in constructive ways to identify strengths and weaknesses.
6. At a minimum, complete the tasks and measurement methods with student and submit your evaluation (“electronic sign off”) in the web-based Competency Portfolio within a month of the end of the IPPE.
7. Serve as a resource and mentor for student that enhances understanding of patient care.
8. Communicate concerns or questions about student progress or programmatic issues in a timely manner with the Institutional IPPE Team.
9. Immediately notify the Associate Director of Experiential Education of any student experiencing difficulties as soon as they occur.
10. Maintain student confidentiality.

Expectations of Students

1. Exhibit professional behavior at all times.
2. Understand and self-monitor progress toward accomplishing required competencies.
3. Adhere to the work schedule developed by the preceptor.
4. Maintain strict confidentiality at all times.
5. Take initiative with patients, physicians, or other healthcare professionals within the policies and standard practices of the site.
6. Demonstrate the required competencies in collaboration with the preceptor, in consideration of the site’s demands, and in cooperation with those the student is assigned to work with.
7. Complete the reflections and other documentation within the web-based Competency Portfolio and communicate with your preceptor about your progress in doing so.
8. Complete at least 120 hours of unpaid learning during this experience and maintain honesty and integrity in estimating and reporting time spent on individual competencies.
9. At the end of the experience, complete a site/preceptor evaluation form.
10. Recognize that the optimum learning experience requires mutual respect and courtesy.

Frequently-Asked Questions

What should students do after being notified of a placement?

Once students receive confirmation of their placement, they will need to contact their preceptor to discuss matters of mutual interest. Examples of issues discussed include:

- Dress code
- Directions; where to park/shuttle/bus; where and when to meet preceptor on first day
- Details of the practicum schedule (if it was not already provided in the placement notification)
- Computer access; determine what identity information is needed by the site
- Completion of any required onboarding training or paperwork prior to the first day on-site
- Suggestions on how to best prepare for learning at that site
- Find out if there is anything students can do to add value to the site

Many sites will require students to complete onboarding requirements by submitting information such as identity information and other paperwork a month prior to beginning the experience so students can start on time and have access to computerized information on the first day at the site. Realize that many sites

will expect students to complete their Healthcare Information Privacy and Portability Act (HIPAA) training regardless of the fact that students have already completed such training for the School.

What schedule of hours should students follow?

Students will be expected to follow the practicum schedule set forth by the site. Information on the type of schedule required by the site will be provided to the student in the placement notification. However, start and end times for each day of IPPE is determined by the preceptor and will be communicated to the student during the orientation process, if not before the start of the IPPE.

Students must complete their practicum in a timely manner in order to allow the next student scheduled for the same site to begin on time. Deviation from the expectations of the School and of the site/preceptor is considered unprofessional behavior and a violation of the student code of conduct. It may be grounds for “no credit.”

Although students must complete 120 hours of non-paid learning time on this experience, students will likely need some extra time to complete documentation paper work and other assignments outside of the practice site.

How can preceptors tell if their student has mastered the competencies?

The student is responsible for completing the required reflections and documentation in the web-based *Competency Portfolio*. We call this the *Competency Portfolio*, because the student must reflect on his or her mastery of the specific competencies in a series of electronic forms and documents. This portfolio is a web-based document and database which the preceptor electronically check-off (sign) once the student has completed their portions.

Under each competency is a task that outlines the activity the student needs to perform, along with a measurement criterion for determining when the competency has been met. The preceptor’s electronic signature on the competency assessment indicates that they feel the student has mastered the competency.

Competencies should be electronically signed by pharmacists who are trained preceptors. In Washington State, pharmacist preceptors are required to complete a state-approved preceptor-training program. Preceptors may elect to have a pharmacy technician (who is not required to undergo preceptor training) teach the student in competencies that involve product preparation. In such cases, it is reasonable to have the technician trainer verify to the preceptor when the competency has been met and the preceptor will then electronically check-off the competency in the web-based portfolio.

Why does each competency have a task and a competency measure?

“Competency” is the ability to perform a task or skill at a pre-defined level. The task description defines the scope of the skill; the competency measure attempts to define the level at which the skill needs to be demonstrated. We hope this will provide a uniform “standard of practice” so that all students enrolled in this course are judged by the same criteria.

Does the student really need to do each competency measure exactly as it is outlined in the manual?

The preceptor’s signature after the competency indicates to us that the preceptor feels confident their student has mastered the competency. This means that the preceptor either had the student perform the competency measure or the preceptor is confident that their student could perform the competency as stated, because the preceptor has seen their student do this task many times. Some of the suggested competency measures may not work optimally at every site. If a preceptor chooses a different measure than the one listed, the preceptor must write down the measure that was used instead used in the “comments” section of each sheet.

If the student has finished all hours but the preceptor still feels that they are unable to sign a particular competency, the preceptor can refuse to sign off. If a competency is just not possible to obtain at the particular site, the preceptor should let the student know up front and so that they can explore alternative ways to accomplish the skill. Even so, students have been able to accomplish these skills via creative means. We would be glad to discuss these options with preceptors and students. However, if the

competency is possible to obtain or demonstrate at the practice site, but the student has simply not accomplished or demonstrated it even though they have been given the opportunity to do so, the preceptor may simply decline to sign off on a competency. At such time, the preceptor or the student must contact the experiential education office. Consequences for such situations will be dealt with on a case-by-case basis. Students should realize that such circumstances will likely delay credit and progression to subsequent experiential courses until the deficiency is addressed. Placement at another site for a limited time to accomplish the selected skill may be necessary.

Do preceptors need to be registered as a pharmacist preceptor with the Washington State Board of Pharmacy?

Yes. The process of becoming a pharmacist-preceptor in Washington State is not cumbersome and is a professional obligation of any pharmacist training a student. If the student is doing these competencies outside of Washington State, then the preceptor needs to meet the requirements to be a preceptor in the state in which they practice (or are licensed, in the case of pharmacists working in the federal health care system).

When do students need to have all the competencies completed?

All students are required to submit their competencies no later than 3 business days after the end of the experience, if not sooner. We highly encourage students to have their competencies ready for evaluation before the end of their IPPE, so that their preceptor can evaluate the competencies before the student leaves the site. If the student does not complete their competencies within 3 business days of completing their IPPE, the student will receive an incomplete in PharmP 531. However, if the student completes the competencies after they have left the site, we ask preceptors to evaluate their work within one week of the student completing their competencies, so that preceptors can evaluate the student's work while it is still relevant.

What schedule of hours should the student follow?

Each preceptor and student will plan the schedule that the student will follow. Students are expected to spend at least 4 hours, and more optimally 6 or 8 hours, at a time on site. Students and preceptors can elect to finish the experience full time over 3 weeks in the summer or part-time over a quarter during the school year. During the placement process the school will work with both students and preceptors to finalize whether each placement will be a full time or part-time experience. Students without previous exposure to inpatient practice will likely spend the majority of their 120 learning hours completing competencies. Experienced students who can get their competencies signed off quickly can use the majority of their 120 learning hours to design and conduct one or more quality improvement or patient safety activities.

Once a day-to-day schedule is agreed upon between a student and preceptor, the student is expected to adhere to it. Significant deviation from agreed-upon schedules and expectations is considered unprofessional behavior and a violation of our student code of conduct; such behavior could result in a grade of "no credit" for this experience.

How do students get assigned to sites?

The school will place students at approved IPPE sites for this experience. However, we are always looking for interested and innovative practice sites and preceptors for this experience. Therefore, we will co-ordinate preferences for schedule and location from students with preferences for schedule and numbers of students from sites in the site placement process. All attempts will be made to coordinate desires of the sites and students when placing students in this experience. However, due to the increasing class size and the finite number of hospitals in the greater Seattle area students usually only get their preference met for with the time block they are placed in or the geographic location of their placement.

Generally, the students begin the site preference process at beginning of fall quarter of their second professional year. Placement is then formalized during winter quarter, and students begin the experience in either spring quarter of the second professional year or the summer between the second and third professional years.

Is the student an employee?

No. Our accreditation standards state that, “Students do not receive payment for participating in curricular pharmacy practice experiences” In addition, we follow the policy below to minimize real and perceived conflicts of interest. The student cannot be considered an employee during the 120 hours of learning time required for this class.

What is the school’s conflict of interest policy?

- The student will not be placed in a practice site where he or she has a paid position supervised by the site preceptor. However, students may be placed at the same system as their paid position as long as their primary IPPE preceptor is not the same person as their work supervisor.
- The student will not be placed in a practice site where a relative provides supervisory authority over a preceptor.
- The student must NOT be paid for activities relating to the practice experience.
- The student must report any other potential conflicts of interest due to personal, financial or other relationships to the Office of Professional Pharmacy Education.

Of course, if a site wishes to offer a paid position to a student once they complete their requirements for this experience, they may do so.

Must sites have a signed affiliation agreement between the site and the school?

Yes. Standards set by the Accrediting Council for Pharmacy Education (ACPE: the accrediting agency for schools of pharmacy) require schools to have signed affiliation agreements with sites. These are written agreements that stipulate liability and assigned responsibility. If a pharmacy is part of a retail chain or health system, the agreement will be with the corporation, rather than with the particular pharmacy. Affiliation Agreements outline responsibilities of the school, site, and student to protect all parties involved, and is signed by legal authorities at the corporate or upper management level.

Must sites provide a quality assurance project for students to participate in?

Not necessarily. Students may simply meet with the person who works most closely with these efforts for the pharmacy and institution to talk about what they do. Students may get a chance to help out with some of this work. But if not, students can still design a plan for how they would approach such a project if requested to do so at the site. Even if students do not carry out the full project, they can think about what would be involved in doing such a project and include that in their written design plan.

Chapter 3. Building An Individualized Learning Experience

Matching a student's responsibilities with his or her education and previous experience is an important task for effective learning and public safety. Depending on previous knowledge and experience, student performance will vary from task *unfamiliarity* to *professionally capable* in your setting. The learning goal and competencies for this course are considered minimum achievement requirements. However, the School recognizes that students with significant experience in inpatient practice will likely progress through these competencies quickly. Therefore, the suggested range of learning activities is divided into three levels: novice, advanced beginner, and competent practitioner. Preceptors should arrange learning experiences systematically, with assistance from the school, into levels to assure novice students are able to achieve the minimum skills while more experienced students are allowed to perform at their greatest potential.

Levels of Learning Activities

Novice Student Activities

A novice student is one who is completely new to a practice setting. Most students progress relatively quickly from novice to advanced beginner. We suggest preceptors start with these initial objectives for students completely new to the inpatient setting.

- Identify location and function of key stations within the pharmacy and other important locations within the health care center.
- Describe procedures for processing medication orders.
- Identify data available through the medical record.
- Identify commonly used medical and drug references at the site.
- Explain correct procedures for aseptic technique.
- Perform calculations needed to determine correct doses of medications.

To master these objectives, it would be worthwhile to have the student work intensively with some of the pharmacy technicians who help with order processing, floor stocking, and mixing intravenous products. One example of a way to structure the first 80 hours of the experience is:

- First Week (hours 1–40) — Oral medication order processing and delivery to patients.
- Second Week (hours 40–80) — Intravenous admixture preparation.

In the final week of the experience, the students could work with pharmacy staff or other health care practitioners as well as on their own to:

- Describe procedures for medication reconciliation at admission and discharge.
- Describe quality assessment or improvement activities within the pharmacy or health care site.
- Correctly perform calculations needed for dosing a total parenteral nutrition product for an uncomplicated patient.
- Analyze a patient's medication list.

These objectives are the first step in acquiring the basic skills necessary for functioning in an inpatient pharmacy. Students with some experience in the inpatient environment will probably already have these skills intact upon arrival and can move directly to advanced beginner activities.

Advanced Beginner Activities

Students spend the majority of their learning time moving from an early advanced beginner to a seasoned advanced beginner who is nearly ready for independent practice. We anticipate that students with prior pharmacy experience will fall somewhere into this category at the beginning of their PHARMP 531–533 experience. By the end of the experience, all students should perform at this level of achievement or be-

yond. Students should achieve a performance level above that of a technician but less than a full pharmacist by the end of this experience.

- Correctly perform all or most steps in filling a medication order.
- Retrieve some information from the medical record.
- Perform intravenous admixture using correct aseptic technique.
- Display professional attitude and behavior toward pharmacy and health care staff and patients.
- Confirm adequacy of product preparation by other pharmacy personnel.

Students who already have some skills in the inpatient environment may progress quickly through Objective 3; you may choose to have them work intensively with a pharmacy technician for anywhere from 8- 40 hours to ensure that the student meets the competencies in this learning objective. The student can then quickly progress on to fulfilling learning Objectives 1, 2, 4, and 5a, spending the majority of the unpaid learning time performing a quality assessment exercise. Such a student's schedule might thus look like this:

- Hours 1 – 20 or 40: Oral medication order processing and delivery to patients, intravenous admixture preparation, check adequacy of product preparation by other pharmacy personnel.
- Hours 20 – 40 or 40 – 60: Describe procedures for medication reconciliation at admission and discharge, describe quality assessment or improvement activities within the pharmacy or health care site, correctly perform calculations needed for dosing a total parenteral nutrition product for an uncomplicated patient.
- Hours 40 or 60 to 120: Design and conduct a quality measurement project of value to the pharmacy.

Competent Student Activities

Students will not be able to move to the level of “competent” in a 120-hour experience, but we hope that they will by the end of their professional program. Here it would be good to reiterate the difference between “competent” and “competency” as used in the context of this class. A “competent” student is ready to become an independent practitioner and thus will be honing skills through the fourth professional year of our program. The “competencies” we describe in this syllabus measure specific tasks that we think students are ready to master at a point about midway through the professional program. The following activities are what we hope students will be able to do by the end of their fourth professional year, not by the end of PHARMP 531–533:

- Accurately and in a timely manner provide answers to questions about complex medication regimens.
- Analyze patient medication regimens to determine therapeutic success and occurrence of actual or potential drug-related problems.
- Appropriately triage multiple requests for medication-related needs.
- Dose and monitor a patient receiving total parenteral nutrition.
- Manage personnel and activities within an inpatient pharmacy setting.

What Preceptors Can Expect Students to Know

Preceptors' expectations for student's baseline skills will depend not only on prior pharmacy experience but, particularly for students without pharmacy experience, on where the student is in the professional curriculum. The following list includes information about when students are taught practice-oriented skills in our curriculum:

Covered in the first professional year (PY1):

- Non-prescription drug therapy.
- Primary, secondary, and tertiary drug and medical information sources.
- Human anatomy and physiology.
- Clinical pharmacokinetics and biopharmaceutics.

- General drug dose formulation and compounding.
- Pharmacy calculations for the community setting.
- Patient counseling, prospective drug use review, and methods for clinical and patient communication.
- Antimicrobial and immunizing agents.

Covered in the second professional year (PY2):

- Basic skills in aseptic technique, IV admixture, medication therapy monitoring, and calculations in the inpatient setting.
- Pharmacology and medicinal chemistry.
- Pharmacy management, law, and ethics.
- Chemical dependency concepts.
- Biostatistics and medical literature evaluation.
- Medication safety concepts.
- Pharmacotherapeutics (1 quarter only).

Covered in the third professional year (PY3):

- Pharmacotherapeutics and therapeutics skills (3 quarters).
- Drug interactions.
- Health care and society.
- Electives (student's choice).

Other things preceptors can expect your student to be familiar with are our policies and guidelines. We would like to encourage preceptors to go online to our website (<http://sop.washington.edu/pharmopp>) to view these policies and guidelines:

- **Student guidelines for infection control and exposure management.** This document outlines the training the students undergo and the management plan for exposure to potentially infectious agents, as required by the Occupational Safety and Health Administration. Students should read and be familiar with the guidelines and procedures for preventing and managing exposure to infectious diseases. Since students will be working in direct patient care settings, risk for exposure is real. Especially for blood borne pathogens like HIV and hepatitis, students should know what they need to do in case of an accidental exposure. Student action in these cases is required within a few hours of exposure for proper protection. If students are concerned that they have been exposed to a blood borne pathogen, please do not hesitate to act. Follow these procedures as soon as possible. Please review these guide- lines on this website so that you are prepared for this potential risk.
- **University of Washington indemnification policy.** This document explains the University indemnification policy for students enrolled in practice-based coursework. Students should read and be familiar with this policy regarding University protection for expenses, settlements, damages, or claims regarding actions of students that cause patient harm or other legal action.
- **University of Washington sexual harassment guidelines.** This document explains steps to take in the event of perceived sexual harassment. Students should read and be familiar with the guidelines regarding sexual harassment. Students with concerns about, or who are victims of, sexual harassment by a preceptor, or other personnel or students at a practicum site should follow these guidelines. There are protections against this type of behavior

Additional documents and links available on this website include:

- **University of Washington School of Pharmacy Ability-Based Outcomes.** These are our official educational program outcome measures when a student graduates from our program.
- **Tips for teaching.** This includes a link to the CEI preceptor training modules, a link to the Washington State Board of Pharmacy preceptor training program, a link to the APhA-NACDS preceptor training program, and information about the Pharmacist's Letter preceptor training program.

Chapter 4: Additional Student Information

Student Guidelines for Professional Conduct

Students should read and be familiar with the standards to which they will be held while in any experiential education course. Issues with conduct involving email communications, adhering to site schedules, mutual respect between student and preceptor, communication with physicians and other health care professionals, appearance and dress code, patient confidentiality, internship licenses, and risk management are covered in this document. Please review the guidelines below. Prior to starting the IPPE, students will be required to sign a statement saying that they have read and will adhere to these guidelines.

They can also be accessed on the web at

oppe.pharmacy.washington.edu/PracticumSite/forms/Student_Guidelines_for_Professional_Conduct.pdf

Students must:

- Communicate effectively and professionally
 - Maintain an active email account and check email daily. All announcements to students will be made using email or the Canvas course site. Save important emails to a special IPPE email folder.
 - Take the initiative in communicating with physicians, patients and other health professionals only when given permission by the preceptor. Students should expect to gain experience in making professional decisions, with the preceptor encouraging greater autonomy as the student learns and demonstrates his or her problem-solving skills.
 - Behave with respect and courtesy toward the preceptor, all other pharmacists and pharmacy staff, technicians, interns, patients and their families, and medical and nursing staff.
 - Reference all information sources in handouts and other written work. Plagiarism is the unacknowledged use of someone else's work and is considered academic dishonesty. Information obtained from specific sources should be paraphrased and referenced using an acceptable reference style. Some assignments may require use of quoted material; all quoted information must be enclosed by quotation marks and the source of the quote identified in the reference list.
- Honor schedule commitments
 - Students must adhere to the practicum schedule agreed upon between the student and the preceptor at the beginning of the experience. Students will arrive at the practicum site on time and will not leave before the agreed-upon time without first asking for permission from the preceptor. If a valid reason exists for being absent or late, the student must notify the preceptor as soon as possible.
 - Students will be allowed state holidays off only with the explicit permission of the preceptor. Holiday matters need to be discussed with the preceptor and agreed upon at the start of the rotation. ***Preceptors have the final decision on holiday and personal time requests by their students.*** Students should not schedule vacations or plan life events, such as weddings, during a time when they are also scheduled to at their IPPE site.
 - Failure to show up at any scheduled time without notifying the preceptor, failure to contact the preceptor at least one month in advance of the scheduled start date and failure to arrive on time for the first day of the practicum or failure to arrive on time more than twice during a practicum may result in a grade of **no credit**. This could lead to a delay in graduation and/or extra tuition expenses.
 - Students are responsible for planning and committing to the IPPE schedule they have been assigned or have set up with their preceptor.
 - Students who are interested in completing projects outside of standard rotation requirements or participating in special services offered by the site must let the preceptor know in advance so these activities can be planned and accomplished.

- Be responsible for learning at the site
 - Students should *actively participate* in pharmacy practice during the practicum and seek guidance from their preceptor, other pharmacy staff, health professionals and the Experiential Education Director.
 - The student, not the preceptor, is responsible for learning gained at the site. Pharmacy preceptors volunteer valuable work time to facilitate pharmacy student learning, but the preceptor’s first duty is to patients and the work site. Students should not expect their preceptors to be available at all times.
- Maintain confidentiality
 - Students may not communicate patient-specific confidential information to any individual outside the care team. All students must complete all required HIPAA training requested by any site.

The HIPAA regulations, Title 45 CFR § 164.514, specifically state that **all names, geographic subdivisions smaller than a state, dates (birth, death, admission, discharge), medical record numbers, phone/fax numbers, and email addresses must be de-identified**. Additionally, **no other dates, patient initials, names of health care sites, names of other health care professionals providing care to the patient, or any other such identifying information should be on any written material regarding specific patients, e.g., documentation notes, presented cases**. Students must remove all of the above identifying information before submitting patient care notes and when presenting patient information to individuals outside the care team. Students can only view confidential information about patients to whom they are directly providing care. *Failure to do so can result in dismissal from the IPPE and no credit for the course. It may also be considered reckless behavior, which could result in refusal of the University to represent the student in the event of a lawsuit.*

- Students must also not communicate proprietary information about site policies and procedures, customers, fee structures or other billing information or any other such information to any individual outside of the site. However, students observing business practices that may be fraudulent, illegal, or unethical are obligated to report such information to the appropriate regulatory agency.
- Students with concerns or grievances may only share these concerns with the individual involved, with their preceptor in as private a setting as possible, or with the Experiential Education Director. Students and preceptors must not discuss concerns or grievances with any other students, pharmacy staff, other preceptors, patients, or other health care personnel. Gossiping about other students, health care professionals, patients, or staff is considered unprofessional behavior.
- Behave professionally
 - Exhibit professional appearance both in manner and dress. Business casual (implies ties for guys) is the norm for the first day. After that, follow the standards of dress and behavior specified by the site.
 - Arrive at each site with name tag, lab coat, and appropriate learning materials.
 - Submit all required evidence of learning on or prior to given deadlines (see below).
- Follow the policies and procedures of the site and regulatory agencies
 - Students must bring a copy of their intern license to the IPPE site to be posted as required by law on the first day of the practice experience. Students must obtain an intern license for every state in which they are scheduled to do a practicum. They must also adhere to federal regulations and the laws of the state(s) in which they are doing their advanced learning experience.
 - Students may be asked to make available to the site their background check, immunization record, HIPAA training certification, CPR card, and/or additional forms either on the first day of training or well before the student arrives onsite to start rotations. Some sites will require a urine drug screen in addition to the comprehensive background check.

Failure to adhere to these guidelines could potentially result in a grade of “no credit” for the learning experience.

In addition, students should:

- Have a plan for personal health care/protection
 - It is strongly recommended that each PharmD student acquire comprehensive health and accident insurance that will provide continuous coverage while participating in the practicum program. Affordable health insurance is available to all University of Washington students. For more information contact the UW Student Insurance Office. Prior to the start of IPPEs the student will need to sign the standard insurance waiver indicating that the individual student assumes responsibility for his or her own health needs, health care costs, and health insurance coverage.
 - Students must know and practice appropriate risk management and infection control techniques. If any incident occurs which might entail risk for student, patient or site, students should seek treatment immediately and then contact the OPPE. Students should *not* sign any forms, unless instructed to do so by the Risk Management Office of the University.
- Contact the IPPE coordinator or director with any concerns about a site or preceptor
 - Contact should be made in a timely manner if students want assistance in resolving questions or problems. If you are asked to perform tasks you believe are significantly outside what might be expected as a learning experience, please contact us once you have left the site for the day.
- Understand grading policies and procedures
 - Grades are credit/no credit.
 - No grade will be awarded until all required paperwork is submitted.
 - The preceptor evaluates student performance and makes a grade recommendation to the IPPE course-master. The IPPE course-master assigns the grade.
 - A passing grade for an IPPE is required for the student to progress further in the Experiential series. For example, a grade of “credit” for the Community Experience is required before beginning the Institutional experience).

Tips for Student Learning

Because most students do not have a background in education, the following information has been developed to give students some very basic information about the way in which people learn. We hope it will stimulate students to think about the way in which they learn, depending upon the situation.

Theories of Learning

There are three currently accepted ways in which people learn: behavioral, cognitive, and sociocultural. Each is a valid method of learning. Students will find they use all three ways, although they may have previously associated only one method of learning with formal education.

Behavioral learning is the type with which you are likely most familiar, as it involves learning that is often constructed by another individual. Behavioral learning occurs in incremental steps, with each step building upon a previous step. To use the illustration of building a chair, with behavioral learning you would first get a book on chair-building, then gather the tools and read how to use each tool properly, then sketch out a plan of how the chair would be built, and then follow that plan to build the chair. Traditional lecturing (i.e., didactic teaching) is generally behaviorist as the lecturer usually starts with the basics and builds on those basics. Sound like most of your college-level and continuing education lectures? Acquisition of psychomotor skills also occurs most optimally via behavioral learning, so many of the dispensing skills you acquire will be done via behavioral learning.

Cognitive learning (also referred to as constructivist learning) involves learning that is constructed by the learner. Learners in this mode feel as if they’re “jumping in with both feet.” To continue the illustration of building a chair, a cognitive learner would simply start building the chair, learning what tools and materials to gather as he or she went along. In this way the learner would have achieved the endpoint (the finished chair) much more quickly than the behaviorist, although the chair would likely be less elegant than the behaviorist’s chair. Problem-based learning is quintessential cognitive learning, so the learning that

occurs from your daily interactions with patients involves cognitive learning. You will perform cognitive learning as you struggle to troubleshoot issues and problems that arise in your training.

Sociocultural learning (also referred to as socio-constructivist learning) involves meaning derived through social interaction. It's harder to compare and contrast this type of learning with the other two methods, since the description of this type of learning is very abstract. Basically, all social norms are acquired through this mode of learning. Your attitudes toward a patient or a supervisor or a set of instructions are subtly influenced by what the group around you feels and how the individuals of that group react as a collective whole. To continue with the chair-building example, if you were building the chair in via sociocultural learning, you would build it with a group of people and the experience of building that chair, as well as the final endpoint of the chair, would be determined by the group consensus. If the group decided it was a stupid assignment, then the endpoint might be "no chair." If the group decided that everyone needed to use the chair, then the result might be a bench. Many of your values, norms, and attitudes have been formed via sociocultural learning. Role modeling is the primary method of sociocultural learning and you will learn more than you realize via this type of learning. It is good to be aware of sociocultural learning so you can avoid picking up negative behaviors.

So, what kind of learning can you expect to do? You will use all three types. This combination will result in something called *self-directed learning*. Knowledge from this type of learning is often retained better, because the information is received in context. Learners have a visual and auditory "picture" in their brains to accompany the "facts." Let's explore this concept a little more.

Self-Directed Learning

Most adult learning (and indeed much of childhood learning) is self-directed (another current buzzword in the educational literature is "self-regulated"). Self-directed learning occurs when the person doing the learning has the *primary* responsibility for the design, initiation, completion, and evaluation of a learning experience. Self-directed learning is actually the way you learn best, because you have been doing it since you were born. We as educators, however, have *conditioned* you to think that the best way to learn is didactically: in a classroom setting. You think this because almost all of your formalized learning at the primary, secondary, and tertiary instructional levels was conducted in a passive learning format (educators lectured, you took notes). Active learning, which you do every day, does not result in a diploma or other item showing proof of learning, yet you probably use more of the information from your active learning experiences, on a daily basis, than that material gained from didactic coursework.

At this point, you may be mildly alarmed at the idea of using self-directed learning in a formal course of study, because if your self-directed learning is typical, it happens in a haphazard fashion. This is how adult learning commonly occurs: through trial-and-error, fortuitous and unanticipated experiences, and (very occasionally) by design. Because adult learning is triggered by the needs of an individual at a particular time, and includes constant redefining of process and goals, it is often only recognized retrospectively. Do you remember scenarios in which you experienced the "aha!" phenomenon (that instance defined in a cartoon by the light bulb appearing over the character's head)? You probably didn't consciously decide to learn but had picked up bits and pieces of information here and there, and a chance encounter or remark made everything come together. You only recognized the presence of a learning experience afterward. Fortunately, self-directed learning *can* occur in a more structured fashion.

One important thing to realize is that self-directed learning is *not* synonymous with learning alone i.e., by yourself. If you are unsure of the truth of this statement, then think back to some of your own self-directed learning. For example, remember the process of making the decision to go to pharmacy school? Although the decision was ultimately yours, you were assisted in the information-gathering process by people and written materials. Experiential learning will also not involve learning by yourself. Rather, it will be a purposeful endeavor to gather together the resources needed, within an organized framework, so that learning can occur. The only difference between the self-directed learning done in a practicum and the self-directed learning done in other parts of your life is that the learning acquired during the practicum will be planned ahead of time, enabling you to recognize the learning as it happens.

Steps Involved in Self-Directed Learning

1. Decide what knowledge and/or skill you want to learn.
2. Estimate your current level of the knowledge or skill and define specifically the level of knowledge or skill you desire to achieve.
3. Identify the specific activities, methods, resources, expenses, and equipment you will need for learning.
4. Decide where to learn, which will also involve identifying who can teach you what you want to know.
5. Set specific outcomes and deadlines (target dates) for your activities, both final and intermediate; identify personal motivators that you will use to increase your motivation throughout the learning experience.
6. Decide when to begin your learning experience.
7. Outline a reasonable pace at which you will proceed during the learning episode.
8. Create time for the learning; obtain all resources or equipment you will need.
9. Begin the learning experience; modify the experience if you detect unforeseen factors that hinder your learning or progress.
10. Appraise the outcome of the experience.

Optimizing Learning

So how can you optimize your learning experiences? First of all, embrace the concept of self-directed learning. Don't go to your practicums with the primary purpose of putting in eight hours of respiration at the site. Instead, go to the site each day with a clear picture of what you hope to learn that day and a plan for how you hope to learn it. Second, don't go to your practicums expecting to be taught everything by your preceptor. Your preceptor will be one of many sources of information you will use to enable your learning to occur. Other sources will include textbooks (behavioral learning), other health care professionals (sociocultural learning), and the patients themselves (cognitive learning). Third, do not pass up opportunities for learning when they present themselves. If you think back over your lifetime, you will probably remember some of your best (positive and negative) learning experiences happened without much advance notice. Finally, be aware that the quality of your learning experiences will primarily depend upon your attitude toward that learning. Remember: *you* are in the driver's seat for your learning experiences. If you don't get where you want to go, blame the driver, not the road signs, car, passenger, mechanic, policeman, road construction worker, etc.

If Things Go Wrong: A Student's Perspective

The majority of the practice-based learning will be enjoyable experiences. Sometimes, however, unanticipated challenges occur. Although each challenge arising in practice-based learning is unique, it is possible to identify some general categories of situations that trigger contact with the experience education office.

The experience doesn't meet expectations. It is impossible to enter a practice-based situation without expectations. If expectations for the experience are unrealistic, then disappointment will occur. Negative expectations may be self-fulfilling. It is important for students to identify clearly what their expectations are for a learning experience; writing down expectations before beginning the learning experiences will help students clarify what their expectations are and whether they are reasonable. If students feel their expectations are reasonable (e.g., contact with patients) but are not being met (such as spending most of the time performing tasks students have previously mastered, such as product preparation and distribution), then students should speak with their preceptor about other tasks which would allow them to learn new skills or hone partially-developed skills.

The experience seems disorganized/unplanned. Development of an activity schedule aids greatly in organization of a practice-based experience. If a student's preceptor does not have such a schedule already in place, then the student should create one based on the discussion with the preceptor about learning opportunities, prior to start of the practice-based experience. Give the schedule to the preceptor for approval/concordance/modification.

The preceptor/site personnel are inconsistent/unwelcoming/overly critical. It is difficult to be in a situation where criticism occurs frequently, and encouragement or identification of skills performed well does not seem to occur. In this case it is again important to inform the preceptor of the situation and events triggering the impression.

The preceptor/site personnel display unprofessional behavior. It is difficult to initiate a conversation with the preceptor when this occurs; many students will choose to say nothing rather than appearing to criticize the site or preceptor. It is important, however, that the preceptor be informed of the situation and the events that triggered the student's impression.

The preceptor's evaluation is not submitted by the deadline. It is challenging to determine the fine line between gently reminding and appearing to harass a busy preceptor about evaluation submission deadlines. If a preceptor's evaluation is not submitted by the deadline, then students should make at least two but not more than three attempts to remind the preceptor. After that, it is best to inform the experiential education office about each of the attempts and let the office make further attempts to obtain the evaluation.

Life happens. The most frequent reason for things going wrong from a student perspective has nothing to do with the practice-based experience itself, but rather personal situations that occur. Loved ones can become ill or die, students can develop health conditions that make it difficult to meet preceptor expectations, an unanticipated event at the site or elsewhere can be emotionally disturbing: the list could go on. It is important to remember that preceptors in general are very flexible about life events, as long as they are informed about what is going on. If students confide in their preceptor about a challenging personal situation, the student has every right to expect that the preceptor will not share the specifics of the situation with other individuals at the site.

Responding to Challenging Situations

First talk to the preceptor. In most situations the student will be able to address the situation without any further intervention. If the student and preceptor determine that the student will need some time off from the site, do inform the Experiential Education Office that everyone has agreed that the student will be taking time away from the site and how that time will be accounted for (Made up at a later time? Waived?). If the situation is one where the student is afraid of sounding overly critical about the site or individuals at the site, then it will be vital to write down in advance all of the actions observed that led to the student's response to the situation. When students discuss the actions with the preceptor, the student can then in a calm voice outline what actions were observed, and how those actions were interpreted. The preceptor may be able to give you additional information that will allow the student to change their interpretation about what was observed, or the preceptor may wish to make an intervention at the site. Either way, the student owes their site and preceptor the opportunity to respond to the observations and interpretations.

If a student feels that their attempts to engage the preceptor in a meaningful dialogue are unsuccessful, then it is time to inform the Experiential Education Office about what has occurred. It will be easiest for us to respond to a written account of what occurred. Be prepared to also inform our office of desired outcome for the situation.

Another reason that students contact our office is to check grounding of fears. We want to be available to listen to student concerns (and student compliments of your sites, preceptors, or activities!). Please contact us if you have questions or concerns.

Chapter 5: Additional Preceptor Information

Benefits Received for Being a Preceptor

Most health care professions and especially pharmacy, enjoy a history and a culture of apprenticeship — helping the next generation learn. We know that without each preceptor's generous contribution of time and experience our students would have a much more difficult time maturing into competent pharmacists. We know that most pharmacists enjoy mentoring students who are passionate about the profession. We are in the debt of each preceptor. While we cannot offer preceptors benefits commensurate with their contributions, here are some things to keep in mind.

Workforce Recruitment

Precepting is a great recruitment tool — preceptors have the chance to preview potential intern employees and create a relationship with them that may continue into paid positions once the student has completed the experience.

Clinical or Affiliate Faculty Appointments

All preceptors who regularly teach students or otherwise interact with the School are eligible for appointment to the Clinical or Affiliate Faculty in the Department of Pharmacy. This title (e.g., Clinical Instructor) and affiliation can be included in résumés and list of job skills. In order to receive the remaining preceptor perks listed below, preceptors must first obtain a clinical or affiliate faculty appointment.

All Clinical and Affiliate Faculty (CAF) appointments are on an annual basis, with current evidence of teaching or other interaction with the School necessary to sustain the appointment. If a preceptor is not currently appointed but wish to be, please consult our web site at <http://sop.washington.edu/office-of-the-dean/clinical-affiliate-faculty/guidelines-process-information/> for further instructions on the appointment process and timeline.

Our Clinical and Affiliate Faculty Appointment and Retention Committee meets annually in the fall. The committee is required by the University to review all Clinical and Affiliate Faculty members to consider re-appointment for the next calendar year. We look for evidence of clinical teaching or other significant interaction with the School as support for reappointment. Promotions are also considered at this meeting. Preceptors are welcome to review our promotion criteria on the web page and, if appropriate, preceptors may request promotion in writing. Candidates for promotion are reviewed in February. Status of newly promoted faculty is official July 1st.

Access to Drug Information Resources

Clinical and Affiliate Faculty are eligible to set up accounts on the University computer system and to access to the University of Washington's Health Sciences Library, the Health Sciences computer system of web links to search engines, databases, and other information of interest to health care professionals. the library system gives those with CAF appointments online access through the web to:

- Online medical textbooks such as UpToDate and Micromedex
- Online pharmacy textbooks such as DiPiro's Pharmacotherapy: A Pathophysiologic Approach
- Online drug references such as
 - Natural Medicines Comprehensive Database
 - Micromedex
 - Drug Facts and Comparisons
- Specialty texts such as
 - Sanford Guide
 - Stahl's Essential Psychopharmacology

UW Bookstore and Software Discounts

Clinical and Affiliate Faculty will be eligible to obtain the Husky cards, which can be used for educational discounts on computer hardware and software through the University Book Store/Computer Center, as well as the annual University Book Store rebate program.

Access to UW Fitness Facilities

For a relatively low cost, Clinical and Affiliate Faculty can also purchase a card allowing unlimited access to the Student Intramural Activities Complex (IMA), which contains weight rooms and exercise equipment; two swimming pools; squash, basketball, racquetball, and tennis courts, among other activities. The card also allows Clinical and Affiliate Faculty to use the services and equipment at the Waterfront Activities Center.

If Things Go Wrong: The Preceptor's Perceptive

There is a chance that preceptors will run into a difficult situation with a student during an IPPE. The reasons preceptors most commonly call us are listed below. If preceptors are aware of these situations, then these situations may be prevented from happening with an IPPE student. If a preceptor encounters any situation(s) that seem worrisome, do not ignore them until the final week of practicum, because the student will not have adequate time to correct behaviors. Instead, please inform the student as early as possible of any deficiencies he or she may display so that he or she has a chance to correct them.

It might be useful to review our *Student Guidelines for Professional Conduct*, which may be found at oppe.pharmacy.washington.edu/PracticumSite/forms/Student_Guidelines_for_Professional_Conduct.pdf

- 1. Inadequate knowledge base.** Knowledge base is a difficult thing to evaluate, especially for IPPE students. If a student is struggling in an area, we ask that preceptors give the students an opportunity to complete the task more than once with feedback on performance. However, if it seems that the student is still struggling to meet the competency, we ask that preceptors call the Associate Director of Experiential Education for further guidance of how to move forward.
- 2. Tardiness.** Each student has been told to settle with you on the first day of the rotation *exactly* when he or she will be expected to arrive at the site (to avoid misunderstandings). Ideally, it is best if students and preceptors agree on daily arrivals before the first day of the IPPE. If the student shows up late once or twice during a practicum experience, it is not grounds for failure of the course (unless he or she is hours late, with no reasonable excuse). However, if your student is routinely late (3-4 times more often per rotation), then the preceptor should inform the student that he or she is at risk of failing the practicum. On the other end of the day, leaving early is acceptable if all of the student's work is done, but not if the work is unfinished. If preceptors choose to allow the student to leave early once weekly for a job, be certain that he or she does not neglect his or her responsibilities and that they still complete their 120 hours. While we want the focus of the experience to be on learning and not just hours spent at a site, the learning experience is diluted for students who put in substantially fewer than 120 hours of learning. All students are required to complete 120 hours of learning time for this course series.
- 3. Absences.** The student should not have *any* unexplained absence-this can be grounds for failure of the course. *Explained* absences are reasonable as long as the preceptor satisfied with the explanation. ("I have to work" is *not* a reasonable excuse for absence.) Preceptors have the final say about time missed due to absences.

Students must adhere to the practicum schedule agreed upon between the student and the preceptor at the beginning of the rotation. Students will arrive at the practicum site on time and will not leave before the agreed-upon time without first asking for permission from the preceptor. If a valid reason exists for being absent or late, the student must notify their preceptor as soon as possible.

Students will be allowed state holidays off only with the explicit permission from the preceptor. Holiday matters and other potential absences need to be discussed and agreed upon at the start of the rotation. ***Preceptors have the final decision on holiday and personal time re-quests by their students.*** Students are informed they should not schedule vacations or plan life events, such as weddings, during a month when they are also scheduled to complete an IPPE.

Preceptors can offer students the option of making up missed time if their schedule or the schedule of the site allows for it.

4. **Inadequate communication skills.** Communication skills are also difficult to evaluate. They can either result in or be caused by behavior problems. Differences in working style can also manifest as a communication problem. How can preceptors tell whether an apparent communication problem is really a problem? There are a series of steps to check:
 - Does the problem really have anything to do with the preceptor? Sometimes events outside of people's lives influence their behavior at work. This does not excuse their behavior if they are rude, thoughtless, or incommunicative, but it does mean that there is probably nothing the preceptor can do about it until their situation is resolved. Remember that everyone has a bad day now and again and if a preceptor can have one, so can the student.
 - Is the problem really one of differences in learning styles? In general, people who go into the practice of pharmacy approach learning in one of two ways. One group of learners loves learning by doing. People in this group have no problem dealing with unanticipated questions or situations. The other group of learners loves learning by thinking. Those in this group want time to examine all aspects of a situation and are less comfortable in situations where they are not given time to think things through. Each type of learner has both strengths and limitations. The thing to remember is that if a preceptor learns in one way and the student learns in another, the preceptor won't be able to work as well with the student until both realize how each person learns best, and then respond appropriately.
 - If it doesn't seem like there is a problem outside the practice environment, and the preceptor understand and is trying to meet the student's learning style, then it is time to call our office.
5. **Lack of motivation.** Infrequently, overt lack of motivation is apparent early on, with a student informing the preceptor at the start of a rotation that he or she has no interest in the site's learning environment. If this happens, please notify us as soon as possible. A preceptor's time and energy are too valuable to spend on a student who refuses to perform. More frequently, preceptors will see subtler signs of motivation lack occurring in students as they approach the end of their IPPE or if they have an anticipated event (e.g., wedding) approaching. Most of the time, simply describing to the student in a pleasant tone the behavior observed and describing the preferred behavior will be enough to help that student shake off ennui. If this doesn't work, then a preceptor can inform the student that continuing to not meet expectations may result in a suboptimal evaluation at the end of the experience. If this fails to adequately motivate the student, it is time to document observed behaviors that didn't meet the preceptor's expectations and to call us.

General Advice

Regardless of the reason for the problem, preceptors must address it verbally with their student. We ask preceptor to listen as much as they speak during these conversations. Most of the time, troubles can be discussed, and a mutually agreeable solution can be reached. If this doesn't work, it's time to call us. We will ask the preceptor to describe the situation and then ask the preceptor if they have spoken to the student about it. If the preceptor's answer is, "no," then be prepared with a good reason why (there are some situations where preceptors are concerned about confronting a student). If preceptor's answer is, "yes," and if there are still concerns about the situation, then we will discuss the possible options. The options will depend on the nature of the problem.

In general, preceptors should make the initial effort to solve problems by direct interaction with your student as early on in the rotation as possible. Be specific and straightforward. Don't beat around the bush, but don't be rude either. Simply saying, "I think we may have a problem here and I really want to talk about it to understand your point of view," can go a long way toward easing a tense situation. If there is a deficiency, identify clearly in writing exactly what the student needs to do in order to correct the deficiency. If the deficiency is not corrected, then be sure to note on the final evaluation the specific area of deficiency, describing the specific student actions and reactions that led the preceptor to think that the deficiency was not fixed. The more a preceptor can explain in writing, the more helpful it is for our office when determining what to do.

Chapter 6: Summary of Student Learning Objectives and Competencies

The following pages represent the information in the student’s competency portfolio. The student’s preceptor is in charge of supervising the student at the site. This does not mean that the preceptor can’t assign the student to work with others to learn specific skills. For instance, the lead technician is probably best qualified to evaluate student competency in preparing prescriptions and another technician can teach prescription intake and pickup. Even other more experienced students working at the site can help to teach the basics. The individuals that are chosen should be good communicators, patient teachers, and honest (but tactful) evaluators.

Task description: Each competency will contain a reasonably specific description of what the student is required to do as steps for the task. Although the steps of the tasks are outlined, the specific procedures that are used to perform the steps of the task at the site should be explained to the student. For example, although every institution has some method of storing and dispensing floor stock, the student will learn specifically how it is done at their IPPE site.

Competency Measure: Each competency has a measure that outlines the level at which the student needs to perform in order to be considered “competent” for that particular skill. The preceptor evaluates and electronically signs off that the student has accomplished each competency in the web-based portfolio. The student must notify their preceptor when they have completed specific competencies that are ready for the preceptor’s evaluation.

The evaluation box for each competency contains the following language:

Exceptional	Competent	Marginally Competent	Deficient
<ul style="list-style-type: none"> • Expectations. Consistently performs above expected level as described. Performance can be described as impressive or exceptional. • Intervention. Requires no intervention by the end of the experience. • APPE-readiness. Demonstrates readiness for APPEs in this practice setting. 	<ul style="list-style-type: none"> • Expectations. Consistently performs at expected level as described. • Intervention. Requires little to no intervention by the end of the experience. • APPE-readiness. Demonstrates readiness or near-readiness for early APPEs in this practice setting. 	<ul style="list-style-type: none"> • Expectations. Meets expectations but performs inconsistently at expected level as described. Performance demonstrates room for improvement by the end of the experience. • Intervention. Requires occasional intervention by the end of the experience. • APPE-readiness. Demonstrates slight performance deficits in readiness for early APPEs in this practice setting. 	<ul style="list-style-type: none"> • Expectations. Performs well below baseline expectations as described. Performance demonstrates worrisome deficits and the student will not be given another opportunity to meet this competency at this site. • Intervention. Requires repeated intervention by the end of the experience. • APPE-readiness. Demonstrates significant performance deficits in readiness for early APPEs in this practice setting.

Preceptors will click the appropriate radio button attesting to the student’s performance of each competency as described. *By clicking the “Exceptional” or “Competent” button for each competency preceptors are attesting to their belief that the student spent adequate learning time to accomplish each competency as required.* It is the student’s responsibility to let preceptors know when he/she has completed their reflection for a competency so that the preceptor can login and electronically sign it off in the student’s competency portfolio.

By clicking the “Marginally Competent” button for the competency you are stating that the student just barely met the competency and still requires some intervention in that area by the end of the experience. By clicking the “Deficient” button preceptors are attesting their belief that the student did not meet the competency by the end of the experience, Furthermore, this is a way for the preceptor to note the student’s worrisome competence level. *Before evaluating the student as “Deficient” on a competency, the*

preceptor should contact the school first. Students evaluated at “Deficient” will not be given the chance to continue working on that competency at the site.

Please note, that while we don’t anticipate this happening, it is important to know that any competency evaluated as “Deficient” will result in the student being removed from the site and the student will not pass the experience. Students who are “Marginally Competent” in multiple areas will be at risk for not passing the experience.

If a student does not pass the IPPE experience, their credit for PharmP 531 and progression in the program will be at risk.

Student Reflection

As students describe their experiences in the web-based portfolio, they are asked to assess their own achievement of the required competencies and strive to reflect on their learning with thought. We ask students to aim for the highest level of reflection in their comments. Each competency will clearly state whether a reflection is required for that particular competency. Additionally, if a reflection is required then there will be specific description of what the reflection should include.

Unpaid learning hours certification. All students are required to complete at least 120 hours of unpaid time learning for this course. By signing off on the student’s competencies the preceptor attests that the student spent this time as unpaid time in the pharmacy. In addition, the preceptor must also sign off on the Hours Log the student completes throughout the experience. It is the student’s responsibility to turn in the completed Hours Log to Canvas at the end of the experience.

How Competencies Are Certified

Students will need to obtain an electronic “signature” from their preceptor or another qualified preceptor for each competency, once the preceptor feels that the student has met the description as outlined in the “task” and “measurement” for that competency. Verifying and evaluating each individual competency is laborious for preceptors, but the trade-off is preceptors can choose which competencies to focus on (and then “sign off”) at specific points in time. Targeting focus areas at specific time periods enables preceptors develop a learning curriculum for their student that is tailored to the specific practice site.

Objective 1: Distinguish the current and expanding interprofessional patient care roles of pharmacists in institutional practice.

Competency 1a: *Determine the patient care role of pharmacists at the site.*

Task: Through interview and observation, determine all activities where pharmacists interact directly with patients, caregivers, or other health care professionals for the purpose of providing care to a patient.

Competency Measure:

- **VERBAL:** The student should be able to verbally distinguish direct patient care activities performed by pharmacists at the site. Describe what pharmacists do based on where they work in the inpatient practice site and outline their similarities and differences.

AND

- **WRITTEN:** In a written paragraph below students must also be able to distinguish the inter-professional role of the pharmacist in the institutional setting.

Competency 1b: *Analyze a patient’s medication list.*

Task: For any given patient medication list, the student must explain generic and trade name, common indications, mechanism of action, dosing information (i.e., usual dosing range, starting dose and any method of titration, dose frequency, parameters affecting dose and how the dose should be adjusted), parameters to monitor for efficacy (name of parameter, target for parameter, and frequency measurement)

parameters to monitor for common adverse reactions (name of parameter, adverse event it would detect, frequency of measurement), and clinically important drug interactions.

Competency Measure: The student must review and workup 2 patients.

- **VERBAL:** Student must explain generic and trade name, common indications, mechanism of action, dosing information (i.e., usual dosing range, starting dose and any method of titration, dose frequency, parameters affecting dose and how the dose should be adjusted), parameters to monitor for efficacy (name of parameter, target for parameter, and frequency of measurement), parameters to monitor for common adverse reactions (name of parameter, adverse event it would detect, frequency of measurement), and clinically important drug interactions.

AND

- **WRITTEN:** To prepare for the discussion with the preceptor the student should complete the form below, assessing each of these pieces of information about each drug on the given list. The student should be prepared to discuss the monitoring parameters within context of their patient. The student's written preparation for each patient should include 1. Age and sex of patient 2. Medication List 3. Likely condition of the patient 4. Potential adverse drug interactions 5. Things to monitor.

Give student med list and vital stats for two different patients but withhold medical problem list. Tell the student to study the "9 to Know" and set a meeting time with the student for a guided discussion.

The student should be prepared to discuss the monitoring parameters within context of their patient. The student's written preparation for each patient should include:

1. Age and sex of patient
2. Medication List
3. Likely condition of the patient
4. Potential adverse drug interactions
5. Things to monitor.

Note: Students at this level are not prepared to fully present a patient case or fully evaluate the drug regimen, but they should be able to look up the drugs involved, think critically about them, and participate in an intelligent discussion about how a pharmacist would go about evaluating, monitoring, and caring for the patient. The preceptor should guide the student through how they would gather the needed information and then approach working up the case.

Competency 1c: Summarize how medication-related information is obtained from patients on admission

Task: Determine how medications used prior to admission are identified and recorded (e.g., medication reconciliation) for individual patients. This can be done through interview/observation or direct participation. Who has this responsibility? If possible, interview a patient or caregiver upon admission to get an accurate and thorough drug list and document this information following proper procedures for the practice site. If you cannot perform the interview, arrange to observe one if possible. Recognize where pharmacists interact directly with patients, caregivers, or other health care professionals for the purpose of getting an accurate and thorough medication history.

Competency Measure:

- **VERBAL:** The student must discuss how medication reconciliation occurs upon admission. Be sure to explain activities performed by pharmacists versus other health care professionals in this process. Also be sure to specify the roles and responsibilities of the pharmacist and other healthcare professionals in completing medication reconciliation at your institution. You can see this will depend on what pharmacists do in their various roles specific to your site. Be sure to discuss how this information affects the patient's care or treatment plan in the inpatient setting.

Competency 1d: Explain how medication-related information is given to patients upon discharge.

Task: Determine how medication-related information is delivered to individual patients and caregivers during hospitalization and upon discharge, and how important information about medication changes are communicated to the patients' primary care providers and community pharmacies. Who has this responsibility? If possible, observe or participate in medication counseling and education for a patient being discharged. Recognize where pharmacists interact directly with patients, caregivers, or other health care professionals for the purpose of medication education and counseling upon discharge.

Competency Measure:

- **VERBAL:** Discuss how pharmacy personnel is involved in patient discharge education. If you were able to observe or perform discharge counseling, please discuss whether you think the patient understood and will he/she be able take the medications as instructed at home.

AND

- **WRITTEN:** Describe any modifications that could occur in the system to optimize pharmacist involvement in delivering medication-related information to patients and caregivers and communication of medication changes to the patient's community pharmacy.

Objective 2: Provide appropriate information about medications.

Competency 2a: *Identify drug information and other information resources available to pharmacy personnel at the site.*

Task: Through interview or observation, determine resources pharmacists use to look up needed information for direct patient care or to answer requests from other health care providers. The student should spend time using these resources to see how they apply to pharmacy practice activities at the site. To do this, a preceptor could have the student look up something he recently had to use drug information resources to find. Once the student looks it up, compare notes on what resources each used to locate the needed information. How did each find the answer? Did each come to the same answer? How could the student have searched more efficiently or accurately?

Competency Measure:

- **VERBAL:** Students must summarize verbally to their preceptor the drug, medical, and other patient care-related resources available to pharmacy personnel at the site.

Competency 2b: *Accurately respond to a drug information request from a patient or health care colleague using appropriate resource(s) and language appropriate to the person requesting the information.*

Task: Answer a drug information question that can be answered using tertiary drug information resources and another question that requires examination of one or more pieces of primary literature.

Competency Measure:

- **WRITTEN:** Generate a written answer as outlined in the task above. In the document, identify the question and list the resources used to answer the question, using the National Library of Medicine reference format. The first question should be answered using tertiary drug information and the second should be answered using the primary literature.

Objective 3: Identify correct procedures for product distribution in an institution.

Competency 3a: *Describe the steps in processing new medication orders at the site.*

Task: Upon receipt of a new medication order, steps to fill it include choice of the correct product, generation of appropriate labeling, and placement of the correct amount of medication in the container that the nurse or patient will use. How would someone look up what drugs are on the formulary at the institution?

Competency Measure: Upon receipt of a written or computerized medication order, the student will either describe or perform in a correct order the steps used at the site to process the order.

- **VERBAL:** At a minimum the student will describe the order steps used at the site to process the order.

Competency 3b: *Prepare in advance prescribed routine medications for individual patients.*

Task: Fill medication cassettes (or any other medication distribution system used, such as an automated dispensing machine) with indicated daily medications for patients.

Competency Measure: The student must accurately fill cassettes or any other device for dispensing daily medications to inpatients of one floor or unit, independently, and accurately.

- **VERBAL:** Describe how the process of charging patients for inpatient medications works. The student must also accurately verbally describe how the process of preparing the routine daily medications works (i.e. batches) to ensure routine medications are dispensed/available at the ordered time.

Competency 3c: *Distinguish the process for supplying floor stock to patient care units.*

Task: Process floor stock medications, including controlled substance floor stock, if this task performed by pharmacy personnel at the site.

Competency Measure: The student must accurately fill and deliver floor stock, using whatever process is used in their institutional setting. The student must also accurately fill or describe verbally the process of filling a controlled substance floor stock order.

- **VERBAL:** At a minimum the student will describe the steps used at the site of filling a controlled substance floor stock order.

Competency 3d: *Accurately prepare sterile products using proper aseptic technique in a timely manner.*

Task: Parenteral fluid preparations must be compounded within the hood using correct aseptic technique. Discuss **verbally** with your preceptor what the pharmacy had to do or change to be USP Chapter 797 compliant.

Competency Measure: If possible, the student independently, efficiently, and accurately should compound the products listed below. If you cannot make CSPs due to institutional policy/USP 797 certification requirements, observe a certified pharmacy personnel compound the following.

- 1 syringe product
- 1 single ingredient parenteral product
- 1 multi-ingredient (at least 2 drugs/electrolytes) parenteral product
- **VERBAL:** response for the following:
 - Student to discuss with preceptor what the pharmacy had to do or change to be USP Chapter 797 compliant.

Competency 3e: *Confirm accuracy of product preparation by other pharmacy personnel.*

Task: Confirm that the product preparer has selected the correct medication and dose, that the product used is not expired, and that the product has been properly labeled.

Competency Measure: The student should check both oral and IV medications within the same amount of time as a staff pharmacist or trained pharmacy technician

- **VERBAL:** The student must be able to articulate to the testing pharmacist exactly what was checked.

Objective 4: Accurately and in a timely manner perform calculations used in institutional pharmacy practice.

Competency 4a: *Demonstrate accuracy and timeliness in the mathematical computation of ingredient amounts, doses, infusion rates, or other relevant calculations.*

Task: The student should be able to calculate doses for any given drug product. Dose calculations can include but are not limited to drug amounts for both individual doses and total quantity of dispensed product, conversion between dosage forms, infusion rates, dosing frequency, and adjustment for decreased renal function.

Competency Measure: The student should calculate quickly and accurately all doses, ingredient amounts, infusion rates, dosing frequency or dosing adjustment for special populations (e.g., pediatric, geriatric, decreased kidney or liver function, abnormal or altered pharmacokinetic parameters) for at least two different patient scenarios. Students must submit 2 different calculations.

- **WRITTEN:** The student must upload 2 different calculations for special patient populations.

Competency 5a: *Describe how drug therapy gets from the pharmacy to the patient and identify opportunities for error in the administration process.*

Task: Follow a drug from preparation in the pharmacy to delivery to the floor and then shadow the nurse as the medication is administered to a patient in order to observe collaborations between healthcare professionals in drug administration. Observe how technology is used to assist personnel to reduce errors. Watch how the drug is administered to the patient.

Competency Measure:

- **WRITTEN:** Summarize in written form everyone who touched the medication once it left the pharmacy and explain how the drug was administered to the patient (e.g., IV push, slow infusion, orally, topically). Describe what procedures are in place to prevent errors. Describe the opportunities that still exist for error to occur in getting the right medication to the right patient at the right time in this institutional setting. Also describe how interprofessional collaborations can improve medication safety.

Competency 5b: *Describe the steps in the processing nonformulary drugs.*

Task: Through interview, observation, or demonstration the student should also determine how an order for a nonformulary drug is processed. How would someone look up what drugs are on the formulary at the institution? Preceptors and students should discuss with students how formulary decisions are made. If possible, have the student attend a P & T committee meeting.

Competency Measure:

- **VERBAL:** At a minimum the student will describe the order steps used at the site to process nonformulary drugs. The student and preceptor should also discuss what happens at a P & T meeting if the student cannot attend.

Competency 5c: *Distinguish the role of The Joint Commission on health care in the institutional setting and how it impacts inpatient pharmacy practice.*

Task: Define what The Joint Commission is and how it influences pharmacy functions in the institution. What is the mission of The Joint Commission? How does it affect what we do in hospital practice and inpatient care? What is a typical The Joint Commission accreditation visit (inspection) like?

Competency Measure:

- **VERBAL:** A short discussion between preceptor and student where the student **verbally** outlines each of the points indicated above is sufficient to merit competency attainment. The student may read through a The Joint Commission policies and procedures manual.

Objective 6: Display professional behavior and a willingness to problem-solve.

Competency 6a: *Be prompt, and appear neat and cheerful, display a positive attitude, adjust adequately to new or unexpected situations, and display a willingness to work in a collegial fashion with pharmacists, technicians, and other health care practitioners.*

Task: As noted above in the competency. The preceptor must define at the beginning of the student's experience what attire is expected, how to meet/greet patients and pharmacy and health care personnel, when and how to ask for help, and what process to follow if the student desires to provide feedback to the preceptor on a specific situation. The student and preceptor will set a schedule and the student should appear at the pharmacy at the agreed-upon days and times. The student should strive to maintain a pleasant positive manner even when circumstances are outside of the student's experience or comfort.

Because the process of developing competency in technical tasks often involves instruction from non-pharmacist individuals, the student should value the information provided by technicians and other health care professionals. Under no circumstances should the student express condescension or other non-collegial attitudes toward individuals with whom they interact.

Competency Measure: The preceptor or co-workers should not document more than 1-2 instances where behavior is unprofessional. Any noted behavior problems should be discussed in a non-confrontational manner with the student. The student should show evidence of acknowledging the problem and working to correct it or prevent future occurrences.

- **VERBAL:** Students should discuss verbally with their preceptor at least one unexpected situation where the student displays professional behavior and a willingness to problem-solve.

Objective 7: Conduct a clinical patient interview

Competency 7a: *Gather and evaluate data for a real patient to identify medication-related issues.*

Task: The student must complete an in-depth clinical patient interview and chart review. The interview and chart review is to help the student learn how to collect all of the necessary subjective and objective patient information in order to understand the relevant medical history and clinical status of the patient. This objective focuses on completing the "Collect" portion of the patient care process. Then in PharmP 532 students will focus on assessing the patient's information and presenting a plan for the patient.

Preceptor Responsibilities:

1. Preceptors should help the student find a patient to interview who meets the following criteria:
 - The patient is able to speak. This means that you cannot interview a patient who is intubated or somnolent.
 - The patient is willing to speak. This will be a general impression of the pharmacist or nurse but will be something you confirm with the patient when you first introduce yourself.
 - The patient is receiving medication therapy of some kind.
 - The patient is not memory-impaired. If the patient has a memory issue but is still someone you want to interview, then you will want to interview the patient's home caregiver as well.
2. Preceptor to confirm that the student has completed the patient interview and assigned patient history, physical database, and work-up.

Competency Measure: Students must complete an in-depth interview and chart review. To guide the interview students will need to complete the "Patient History and Physical Database Notes". This is for the

student to use to collect notes from their interview. These notes MUST be HIPAA compliant and contain only de-identified information. Since this will most likely be the first in depth interview the student completes for a real patient, the student will need to complete the interview and show their notes to the preceptor to “Meet Expectations” for this competency. Students are expected to keep their notes from the interview since they will use them to complete Objective 7b. So, the student should gather and assess all information needed to present and discuss drug related problems for this patient.

Competency 7b: *Using the information gathered from the patient interview, present a case presentation and create a plan for one drug related problem related to this patient's case.*

Task After completing the patient interview (competency 7a), the student must then present the case to a pharmacist, ideally to the pharmacist who oversaw the care of the patient the student interviewed. This presentation can also be presented to the student’s primary preceptor.

The presentation should last no more than 5 minutes. In the 5 minutes, the student should summarize the patient case, highlight one medication problem (or one potential problem), and the student should outline a potential plan for the patient’s care. Further instructions on how to prepare for a case presentation can be found at the end of the Institutional IPPE guide. The student is not required to create a handout for this presentation.

This will most likely be the first time the student conducts a case presentation. The goal of this competency is to have the student conduct a case presentation to a pharmacist and receive feedback in order to become ready for APPEs. We ask the preceptors let students know one thing that went well and one thing that could be improved. There is a general rubric at the end of the Institutional IPPE Guide the pharmacist can use to help give feedback to the student.

Competency Measure:

- **VERBAL:** At a minimum the student will use the information gathered from the patient interview to present a patient case detailing one medication related problem (or potential medication related problem) and a potential plan for the patient’s care. The student will present the case to a pharmacist. By simply giving a case presentation the student will have completed the minimum requirements to complete this competency.

Objective 8: Design a quality measurement project

Competency 8: *Design a quality measurement project that could be of value to pharmacy management in an institutional setting.*

Task: Through interview and observation, determine quality assessment or improvement activities in process or recently completed at that site.

Competency Measure:

- **WRITTEN:** Identify the background for the project, including justifying project need and potential benefit in the introduction, and then describe in detail the methods to use to implement the project. This written document should be prepared as a research or business proposal and included with this syllabus material when turned in for final credit.

Remember, novice students need only summarize a quality assessment or improvement project in written form. Advanced beginner students (those already experienced in inpatient pharmacy who quickly accomplish the other competencies) should implement a project and then write a research summary of how it went. Such a written report should include, in addition to the required elements listed above, results of the project and evaluate both benefits and pitfalls discovered during implementation.

Patient Interview Guide for Objective 7

Here is a guide for accomplishing this interview in a way that you can evaluate the patient's drug related problems and prepare to present them (next fall).

Step #1: Identify issues that need to be discussed with the patient

You absolutely *must* talk with the patient. You will feel more comfortable interviewing the patient, however, if you can determine some discussion issues before starting the patient interview. To do this, you will first want to scan the patient's chart or profile. Consider:

- *The current medication list.* You will find this on the patient profile or most recent medication administration record (MAR). What medications has the patient been prescribed? What likely disease states does he/she have?
- *Compliance/Adherence* (patient profile or most recent MAR). How often does the patient get his or her chronic medications refilled? In an institutional setting you will want to glance at the MAR to see if the patient has been receiving or refusing his or her medications.
- *Disease state control* (recent progress notes). Monitoring notes written previously by health care providers will be useful in an institutional or clinic ambulatory setting. If you are at a community pharmacy setting, however, you may not have extensive documentation of previous disease state control available. Look for disease state monitoring data obtained through interview, physical examination, and laboratory values. Well-written progress notes will include this information.
- *Cost* (patient profile will contain costs; most recent MAR will not). Are any chronic medications high cost? Is there any indication that lower-cost agents have not worked? The physician's sample cabinet facilitates initiation of high-cost brand name products without preceding trials of low-cost agents.
- *Adverse drug effects* (recent progress notes). Are there any medications which may have been prescribed to treat side effects from other medications? When thinking about adverse drug reactions, you will find the "prn" portion of an MAR useful, since as-needed medications are often given to combat side effects from routinely scheduled medications. For instance, if the patient begins asking for a laxative shortly after beginning opiate therapy for pain, you will suspect opiate-induced constipation.

To summarize; prior to interview you will want to look at the patient's medication list in the chart or profile in any setting, the MAR in an institutional setting, and any previous care notes which would tell you how well the patient's disease states are controlled. Included in this syllabus is a patient interview preparation form. Use it as you peruse the chart looking for potential issues about which you would like to get more information from the patient.

Note: You will notice that the first step is to quickly identify discussion issues, *not* to read the patient's chart from one end to the other. This is because the most important source of information that will generate your patient's problem list is not the chart: it is your patient. If you have previously seen few patient charts, it will be easy for you to spend hours (literally) reading the chart, aimlessly writing down every detail, and not discriminating between what information is important and what is not. Only after the patient interview can you use the chart information efficiently.

Step #2: Interview the patient.

Before beginning the interview, you will need to introduce yourself and confirm that this is a learning exercise for you. Thank the patient for his or her willingness to let you learn from him or her. Tell the patient you would like to ask him or her some questions about his or her medication use. You can expect that your first interview will probably take at least 10 minutes if patient's drug regimen is simple, and longer if regimen is complicated. Don't worry about the time involved at this point! You *will* get faster with practice. An example of a case work-up/handout is included near the end of this syllabus. Also included in this syllabus on is a short tutorial on gathering information from the patient. Although it's likely you have already received this information in therapeutics lab, it would be good to review the information prior to doing a real interview.

Step #3: Collect objective data.

- Conduct any physical examination necessary to test your drug-related problem hypotheses.
- Check current and past laboratory data if you have not already done so. Have there been any changes that support drug efficacy or toxicity?
- Review diagnostic tests to determine if any support drug efficacy or toxicity. These will also give you an idea of the severity of the patient's medical problems.
- Call the patient's pharmacy if you have any questions about current prescription drug doses. You can also ask about refill patterns to confirm compliance.

Step #4: Mentally assess the patient and determine your plan.

You will probably complete this step at home. Plan on spending at least two hours organizing and word-processing your patient data, reviewing drug information, and formulating your patient work-up.

Step #5: Write your patient history and physical database and patient work-up.

You will need to provide for your preceptor a complete *written* synopsis of your patient's health history and physical information. Remember that you will use *no* patient initials, *no* dates, *no* care provider names, and *no* location names.

Patient Interview Preparation Worksheet

This worksheet is designed to supplement the data collection form and help you to transition from information you find in the patient chart to the information you will need to gather in the patient interview.

Answer these four questions after you have examined the patient chart but before you interview the patient.

1. What medical condition or drug related problem will you focus on during your interview today?

2. What assessments do you need to review to evaluate this patient's condition or problem and drug therapy?
 - a. labs
 - b. physical exam
 - c. interview

DATA TYPE	SIGNIFICANCE (Why do I need this information)
LABS	
PHYSICAL EXAM	
INTERVIEW	

3. What follow-up would you recommend for monitoring or resolution of this condition or problem?

4. How will you start the interview session with your patient today?

A Guide for Patient Interviews

What information do you need to obtain? How can you make sure you gather that information completely and consistently? Experienced clinicians use the Standard Organization for Patient History and Physical Database. Consult your blue card as a mental “nudge” for directing the interview. You may choose to design your own data collection form. Regardless of the data collection method you select, your pharmaceutical care database must include detailed information about medication use:

Prescription Medications. Review all prescription medications the patient is currently taking. For each drug, note:

- Drug, dose, route, frequency, indication (this is the *patient’s* version of the indication).
- Efficacy (“Tell me how you know this medication is working for you.”)
- Toxicity (“Are there any problems you’re having which you think may be caused by this medication?”). If the patient says “no,” then probe by asking about a few of the most common side effects.
- Compliance (“How often do you actually take this medication?” or “Tell me what interferes with your ability to take the medication regularly.”) What does the patient do if a dose is missed? Try to verify if cost, dosing frequency, adverse effects, or personal beliefs may be an obstacle to patient compliance. If your patient is able to state clearly how s/he ensures that all drugs and doses are taken on time and as prescribed, then you will feel more comfortable trusting their compliance self-assessment.
- Medication management issues. How does the patient store his or her medications? Is the patient able to administer the medication easily (e.g., tablet size can sometimes be a problem)? How many physicians does the patient see? What is the name and number of the pharmacy(ies) at which the patient gets his or her prescription filled? How does the patient remind him/herself to obtain refills? Is transportation to physician or pharmacy a problem? Inquire about technique and maintenance of devices (such as spacers, peak-flow meters, blood pressure or blood glucose monitors) used to facilitate drug delivery or monitor drug therapy. Have the patient demonstrate their inhaler use technique to you.

Non-prescription Agents. These include over-the-counter (OTC) medications, herbal and other natural remedies, vitamins and minerals, and non-drug therapy. Inquire about non-prescription agents used by the patient using the “head to toe” Review of Systems approach as follows. In addition to gaining valuable information about non-prescription agents the patient uses routinely or infrequently, you will also often identify disease states which you may not have identified through your prescription medication portion of the interview.

- HEENT: nose, ear, or eye drops; nasal inhalers; analgesics used for headache or sinus pain; dental products.
- Respiratory tract: antihistamines, decongestants, OTC inhalers.
- GI: antacids, antiflatulants, antidiarrheals, laxatives, hemorrhoidal preparations.
- GU: urinary antibacterials; vaginal anti-infectives; usual amount of fluid consumed daily, what kind of fluid (e.g., soda pop versus water versus lite beer).
- Musculoskeletal: aspirin, anti-inflammatory agents, acetaminophen, or combination pain medications
- Dermatological: psoriatic, seborrheic, anti-infective, or analgesic topical preparations; corn/callus pads or other foot care.
- Hematological: consider iron, B12, folate.
- Overall/system-wide: insomnia or motion sickness medications; vitamins; herbal, homeopathic or other alternative healthcare products. Ask about tobacco and alcohol use, noting favored product, quantity, frequency, and duration of use. Ask the patient in a straightforward manner ask if he or she ever uses non-prescribed drugs for recreational purposes. The patient may not be honest with you about use, but they are more likely to be honest if you ask using a matter-of-fact tone.

Establish how often the medical problem occurs, if the non-prescription therapy works, and if it causes any side effects. Inquire where your patient usually buys non-prescription products (i.e., is there a pharmacist or other health care professional available there to answer questions about the products?) and how s/he obtains answers to questions about non-prescription products.

After you have finished going over both prescription and OTC medications and non-drug therapy for problems the patient may note, review with the patient the list of disease states the patient appears to have. Ask them what disease states or medical problems you have missed.

Inquire about allergies and adverse drug reactions (ADRs). For each drug the patient states, obtain as much of the following information as possible.

- Name of drug to which reaction occurred. Occurrence of similar reaction when drugs in same class taken. Number of times the same drug was used prior to reaction, without adverse sequelae.
- Reason patient took the drug. Likelihood of viral infection preceding drug use.
- Complete description of physical symptoms of reaction. Conduct physical assessment if ADR currently in progress. Differentiate between hives and maculopapular rash.
- Timing of reaction versus administration of drug (e.g., “How soon after you took the drug did this reaction happen?” “How many days or doses into therapy were you when this reaction occurred?”). Any information you can obtain about other medications that were started around the same time the reaction occurred may also be useful.

Level of general knowledge of disease state. Ask the patient if s/he can describe the disease, e.g., “Just to give me an idea of your understanding of congestive heart failure, please describe what is happening.” Probe for understanding of the effects of overtreatment, under treatment, or sporadic treatment of the disease, e.g., “Tell me what long-term complications you may avoid if your blood pressure is lowered.” Ask about therapies used previously for each disease state. Note drug names, doses, frequencies, duration of use, efficacy, toxicity, and compliance for each medication previously used.

Overall attitude about medications and disease states. For example, “Tell me how you feel about medication use, in general.” or “How do you feel your medications impact your quality of life?” These questions could give you some important tips about cultural and personal beliefs that might affect current or future drug therapy.

Patient height and weight. Obtain this verbally if you cannot measure the patient yourself or do not have access to recent weight and height determinations made by other health care professionals.

Patient History and Physical Database Notes

ID:

CC:

HPI:

PMH:

DH:

OTC Medications:

Allergies:

FH:

SH:

ROS:

PE:

Vitals: HR: BP: RR: Temp: Wt:

Pertinent Labs and Dx Tests:

The Patient Presentation

You will present your patient using the patient history/physical database format to a pharmacist at your site. You will present this information in about 5 minutes. As you prepare for your presentation, keep in mind the following information:

- If you use a handout as a guide for your presentation, don't read the information on the handout word for word to your audience. You should know the information on it well enough that you can deliver it with only occasional reference to your handout; instead, spend your presentation making good eye contact with your audience. This requires that you know the format and your patient data well, but do not memorize what is written on your handout and simply recite what is written.
- If you have a long list of medical conditions or medications, do not read the entire list to your audience. Instead, draw the attention of the audience to the parts of the list on which you will concentrate.
- Similarly, you may have a list of drug-related problems that the patient has, but because of the short time for presentation, you will tackle only one drug-related problem. State exactly what you will do and your deadline for getting it done (e.g., before 2 pm, before you leave, tomorrow morning). Tell what you will monitor, why, how often, your target, and when you will worry.
- Remember that HIPAA laws state that you cannot refer to any geographical area smaller than a state. You cannot refer to any specific people or places, nor can you use any specific dates on your handout (the one exception is that you can list the date you wrote the note)

Steps you should follow when you work up a patient

Define current medical problems.

After you have collected both the subjective and objective data, you need to make a mental or physical list of all the patient's *current* medical problems—those problems the patient is experiencing or being treated for at this time.

Determine goals of therapy for each of the patient's medical problems.

You must determine a goal for each medical problem for which the patient will receive drug or non-drug therapy. Trying to solve a problem without first setting a therapeutic goal is similar to getting into a car and starting to drive before you decide where you want to go. You will waste a lot more time and fuel than if you plan your destination and check the route before getting into the car. The four primary goals for therapy are:

- Cure a disease (e.g., infection)
- Eliminate or reduce a patient's symptoms (e.g., pain control, congestive heart failure)
- Arrest or slow a disease process (e.g., diabetes, cholesterol reduction to reduce risk of coronary heart disease)
- Prevent a disease or other unwanted condition (e.g., immunization, contraception)

There are other secondary goals that you, and the patient, will have. Attaining these secondary goals will maximize your ability to attain the patient's primary goals. Secondary goals include:

- Avoidance of adverse effects
- Convenience
- Cost-effectiveness
- Education of the patient

For each goal, you need to determine a measurable, patient-specific endpoint. The endpoint can be objective (e.g., measuring the blood pressure of a patient with hypertension) or subjective (e.g., patient self-rating of his/her cancer pain using a pain scale). You must use the same method of endpoint measurement each time you test for goal attainment in order to ensure comparability of the measurement with past measurements. As you tailor your goal to your patient, remember that the goal must be reasonable. For example, it is probably not reasonable to set a goal of "no pain" for a patient with severe rheumatoid arthritis. Instead, you will try to decrease the pain to a level where the patient can perform most of the necessary activities of daily living.

Analyze the subjective and objective data to determine your patient's drug-related problems.

There are five general categories of drug-related problems. They are:

- The patient needs a drug that he or she is not receiving (needs drug?)
- The patient is on a suboptimal drug - there is a more optimal drug that the patient should get (wrong drug?)
- The drug dose is suboptimal (wrong dose?)
- An actual or potential adverse drug reaction is occurring/could occur (ADR?)
- The patient is experiencing an undesirable drug interaction (unwanted DI?)

Another reason for writing a note could be to clarify the patient's medication regimen. This is usually done at intake and when care is being transferred between sites (e.g., discharge). It may also be done in a clinic setting, if the purpose of the patient interaction is to review overall drug therapy.

To help identify whether or not your patient has any actual or potential drug-related problems, ask yourself the following questions about each of the medications:

- Is the treatment working? If the answer is “no,” there could be several explanations: underuse, drug ineffectiveness, a dose that is too low, or a drug interaction that has led to a serum drug concentration that is lower than desired.
- Is the treatment causing toxicity? Could any of the medical problems be drug-induced? Are any abnormal laboratory values drug-induced?
- Are the doses correct? Consider the patient’s age (especially pediatrics and geriatrics), weight, renal and hepatic functions, dosing schedule, and dosage form (regimen convenience, possible need for sustained release products, cost effectiveness).
- Is the patient taking the medications as prescribed? Is there evidence of non-adherence, overuse or underuse by the refill patterns as indicated on your computer? If “yes,” try to find out why (confusing regimen? cost? side effects? personal or cultural beliefs about the medication or disease states? presence of interacting drugs?).
- Is the regimen cost-effective? Is there any medication the patient is taking for which there is a lower-cost alternative? If so, has that alternative been tried already? If the alternative has been previously used, was the dose maximized? Are all medications covered by the patient’s insurance company? Is there any evidence of therapeutic duplication? Could more than one of the patient’s medical problems be treated with one drug?
- Are there any contraindications to be considered? If the profile indicates prior allergies, the current regimen should be screened for possible cross-reacting drugs. If the patient is receiving a potentially cross-reacting drug without deleterious effect, this needs to be noted for future therapeutic consideration. Consider and inquire about the possibility of pregnancy in women of child-bearing age who are not using oral contraceptives and who are to receive a medication that could adversely affect a fetus.
- Are there any drugs prescribed for the patient with no apparent indication? If the answer is “yes,” either you have failed to identify one of the patient’s medical problems, you have overlooked an unusual use of a drug specific to this patient, or you have identified a possible inappropriately prescribed drug. You should investigate further and make necessary interventions.
- Are there any medical problems (diagnoses) identified by the prescriber or you for which no drug therapy has been prescribed? If the answer is “yes,” it may be appropriate (e.g., a patient with type 2 diabetes who has been able to achieve acceptable blood glucose control with diet alone). On the other hand, perhaps you failed to identify a drug that was prescribed for the patient, you misunderstood the indications for a drug that you thought was being used for something else or the prescriber has inadvertently forgotten to order something for that patient. You should investigate further and develop a plan for any necessary interventions.

Using the questions above, you should develop a list of drug-related problems. Each drug-related problem should correspond to one of the medical problems. It is helpful to write the lists alongside each other.

In addition to determining the drug-related problems, you must also be able to justify why you think they exist. What signs and/or symptoms led you to suspect the drug-related problem? Be able to defend the existence of problems you detect.

The list of questions above probably seems pretty laborious. Remember a couple of things. First, it will be a lot faster to mentally review the list than to read it as you just did. Second, practice will make you quicker. How do experienced clinicians determine drug-related problems quickly? Clinicians have developed their own unique ways of looking at patient data to determine drug-related problems.

For each drug-related problem, identify all reasonable therapeutic alternatives.

Consider various drug classes and non-drug therapy as you think about the different ways you could go about solving each drug-related problem. For each therapeutic option, determine:

- the evidence for efficacy
- the likelihood and severity of adverse medication effects
- the number of daily doses
- the impact (either positive or negative) of the option on the patient’s other diseases

- the cost relative to the other agents.

You will have learned much of this information in your therapeutics series, but you may have forgotten some of it, so you must plan to do a lot of re-reading during your clerkships. Additionally, you should make it a practice to search the primary literature regularly to determine the most effective treatments. The ability to clearly summarize the most recent evidence supporting (or disputing) each treatment option will allow you to provide the best care possible for your patient. You will be queried extensively about the therapeutic alternatives for your patient, so do not neglect this important step!

Choose and individualize the best therapeutic option.

If you have done a good job collecting and evaluating the benefits and hazards of each of your therapeutic options, then choosing the most reasonable therapeutic option should be easy. You must then individualize that option to fit the characteristics of your patient. This is where knowledge about height and weight (for pharmacokinetic dose considerations), concomitant diseases and medications (for drug-disease and drug-drug interactions), and compliance history (to determine frequency of doses) will be vital. If your plan includes drug therapy you will need to specify the drug, dose, route, frequency, and duration of therapy. All drug and non-drug plans should include some degree of patient education.

Design a monitoring plan for efficacy and toxicity.

After choosing a therapeutic regimen, you will need to design a plan that will allow you to see if the drug or non-drug therapy works, and if it causes any problems. Your plan should be specific. You need to think about exactly *what* will be measured, *who* will do the measuring, *how often* it will be done, *when* you will worry, and what your backup plan will be. You will need to be able to defend your choice of what you measure and how often you measure it. This will be easy if the monitoring parameter is cheap, quick, and noninvasive, but more difficult for expensive, lengthy, or invasive measures.

Care Plan Development

Current medical problems	Goal of therapy	Measurable endpoint
1.		
2.		
3.		
4.		

Current drug-related problems	Justification	Therapeutic alternatives

Recommendation	Monitoring Plan

Example Case Work-up

There are a couple things to remember while reading the example. First, the drug-related and medical problems, goals for therapy, therapeutic alternatives, recommendation and monitoring plan information you see in tabular form are things you usually do mentally. You do not need to write these down for the material you present to your lab group, although if it helps you organize your presentation, you are also welcome to do so. Also, two drug-related problems were noted in the work-up, while you should only plan on identifying one for the purposes of this patient visit.

Scenario: You are a pharmacy student at a community pharmacy. Mr. Smith, a 68-year-old gentleman who has been a patient this pharmacy for several years, enters the store and presents a prescription for Coumadin 2mg #30, i po qd. You have available to you Mr. Smith, his pharmacy profile, and a sheet of his laboratory values, which your preceptor has trained him to bring every time he comes to the pharmacy. The following information is the history and physical data you are able to obtain, your assessment of Mr. Smith's situation, and your chart note. Note that you would present the information in the H&P, as well as your work-up, verbally in front of the class. The SOAP note is similar to what you will submit to Dr. O'Sullivan.

H & P Database

ID: 68-year-old male

CC: Needs increase in warfarin dose due to decreased efficacy of past dose

HPI: Takes warfarin daily for DVT prevention. INR today was 1.5 and so physician has decided to increase his warfarin dose from 5mg po qd to 7mg po qd.

PMH:

DVT, 2 months ago
Hip replacement surgery, 3 months ago
Atrial fibrillation, single episode 4 years ago; currently in NSR
CHF, diagnosed 7 years ago
COPD, diagnosed 5 years ago
Anterior MI, 14 years ago; no current chest pain

DH:

Warfarin 5mg po qd x 2 months (DVT; same dose since discharge from hospital 2 months ago)
Digoxin 0.25mg po qd x 7 years (CHF)
Ipratropium 2 puffs QID x 9 years (COPD)
Albuterol 2 puffs QID x 9 years (COPD)

OTC medications:

Multivitamin with iron and minerals, i po qd x 7 months
Psyllium i scoop in glass of water for constipation, daily x 4 years
Bismuth salicylate 4 tablespoonfuls prn diarrhea (took 1 dose twice in the past year for stomach flu)
Alfalfa tabs 2-3 qd for health; friend recommended this to him about a month ago.

Medication refill records indicate that he obtains refills on time; he obtains all prescription and OTC medications from this pharmacy; he bought alfalfa tabs at health food store.

Recreational drug use: 40-pack year smoking history: quit 2 years ago; occasional alcohol use: 1-2 drinks/week; no recent change in that amount

Allergies: denies history of medication or environmental allergies

FH: Father died of MI at age 54

SH: Retired; lives with spouse who assists with medication management at home; denies any changes in ingestion of vitamin K containing foods

ROS: No current complaints

Lungs: clear sputum, no spells of coughing recently; denies SOB, DOE, PND; sleeps with one pillow; is comfortable walking short distances (no change from 3 months ago)

CV: denies chest pain

Skin: denies bleeding or bruising

GI/GU: stools dark brown; urine clear, yellow, denies blood

PE:

5'10", 80 kg today (usual weight) HR: 85, regular rhythm BP: 135/82 RR: 20 temp 37.2

No bruising found on arms, legs, or face.

Pertinent Labs:

Today	2 weeks ago	4 weeks ago	6 weeks ago	8 weeks ago (at discharge)
INR: 1.5	INR: 1.9	INR: 2.4	INR: 2.6	INR: 2.3, alb 4.5

Current medical problems	Goal of therapy	Measurable endpoint
1. recent DVT	prevent recurrent thromboembolism	therapeutic INR
2. CAD	prevent angina and MI	no anginal episodes

Current drug-related problems	Justification	Therapeutic alternatives
1a. under-anticoagulation* (wrong dose? drug interaction?)	Subtherapeutic INR Possible causes: <ul style="list-style-type: none"> Diet (no recent change) EtOH (patient denies) Underlying disease state change (no evidence to support) Drug interaction (recent addition of natural product which contains varying amounts of Vitamin K) Compliance (no evidence of noncompliance) 	<ul style="list-style-type: none"> increase warfarin dose (problematic considering inconsistent amount of vitamin K in alfalfa tablets) discontinue (D/C) alfalfa heparin (prolonged heparin use would be more expensive than warfarin; short-term LMW heparin use might save cost of ultrasound to check for clot formation)
2a. inadequate MI prophylaxis (needs drug?)	Current AHCP guidelines recommend aspirin and beta-blocker for all patients post-MI unless contraindicated	<ul style="list-style-type: none"> ASA 81mg po qd (lower dose will minimize risk of bleeding) ASA 325mg po qd beta-blocker (contraindicated secondary to CHF + COPD)

Recommendation	Monitoring Plan
1. anticoagulation <ul style="list-style-type: none"> D/C alfalfa tablets. Start enoxaparin 80mg (1mg/kg) SQ q12h. D/C when INR \geq 2.0. Continue warfarin at current dose. Instruct patient to self-administer SQ medication. 	<ul style="list-style-type: none"> Return for INR check in 5 days Patient to self-monitor for signs/symptoms (S/S) of DVT: calf warmth, tenderness or pain. Patient to call provider immediately if experiences chest pain or SOB. Patient to self-monitor for S/S minor, moderate, and major bleed: visual check for gum, urine, stool, skin bruising, epistaxis.
2. MI prophylaxis <ul style="list-style-type: none"> ASA 81mg po qd 	<ul style="list-style-type: none"> Patient to self-check for bleeding as noted above. Stool guaiac in 3 months.

***note that you will only cover one drug-related problem in your presentation**

PHARMP 532:
Introductory Pharmacy Practice Experience

Patient Presentation Assessment Form
UW School of Pharmacy

Student Name: _____ Date of Presentation: _____

Name of Evaluator: _____ Seminar Topic: _____

Abilities Demonstrated. I = will improve with more practice, S = satisfactory, E = exemplary.

NA means that subject was not discussed or did not apply to presentation. Please circle the appropriate rating for each aspect of the presentation.

Content and Completeness

Factual accuracy and appropriateness. Consider whether scientific/clinical evidence is provided to support statements, depth and breadth of covered points, and ability to explain, illustrate, or apply presented points correctly. Also consider whether material is appropriate for audience level, there is a reasonable volume of information, and examples, graphics, and/or humor are used effectively. I S E NA

Organization and interpretation of data. Consider logical progression of ideas, flow of material, accuracy of data interpretation, ability to critically evaluate data, reliability of data sources. I S E NA

Style

Method of delivery and response to questions. Consider independence from notes, enthusiasm, pacing or other distracting behaviors, voice (inflection, pitch, speed, volume, enunciation, use of uh, um, you know), timing, eye contact, clarity, stiffness. Consider ease, accuracy, and courtesy of response to questions, and ability to repeat question for audience if questioner has soft voice. I S E NA

Handout and other visual aids. Consider neatness, completeness, organization, plagiarism of material from published sources, references, graphics. I S E NA

Additional Comments

Things this student did well: _____

Suggestions for improving the next patient presentation: _____

