Introduction
Curricular outcomes for the School of Pharmacy – Worcester/Manchester (SOP-W/M) PharmD program were designed to be relevant to students' lives as pharmacists and citizens in a diverse world. More specifically, the curricular outcomes answer the question “What should a graduate of the SOP-W/M PharmD Program (an entry level [newly graduated] pharmacist) know, be able to do, and value?”

The curricular outcomes focus on the integration of foundational knowledge and professional ability outcomes for SOP-W/M PharmD program graduates in terms of four broad practice domains (adapted from the CAPE Outcomes 2013):

1) Foundational knowledge that is integrated throughout pharmacy curricula;
2) Essentials for practicing pharmacy and delivering patient-centered care;
3) Effective approaches to practice and care; and
4) Ability to develop personally and professionally.

The 4 broad domains of CAPE Outcomes 2013 are further divided into 15 specific subdomains.

Students in the SOP-W/M PharmD program should be able to successfully provide patient-centered care and medication therapy management using foundational knowledge and professional ability-based outcomes that include critical thinking, ethical decision making, self-awareness, social responsibility, interprofessional interaction, lifelong learning, and effective leadership, research, communication and problem solving skills.

Curricular outcomes are intended to guide SOP-W/M PharmD program development and assessment, and are integrated within the structure of the pharmacy curricular. In addition, curricular outcomes serve as a guide for faculty and administrators in determining programs of study, course objectives, appropriate learning experiences, and assessment and program evaluation strategies. Curricular outcomes are taught, practiced, and assessed within various classroom and professional contexts at multiple points in the curriculum to assist students in making connections between their learning experiences and the practice of pharmacy.
MCPHS University prepares students for successful careers in healthcare through excellence in teaching, scholarship, research, professional service, and community engagement.

- Learner-centered teaching and student engagement that fosters intellectual vitality, critical thinking, and lifelong responsibility for learning and continuing professional development;
- Honesty, integrity, professionalism, and personal responsibility;
- Respecting diversity and appreciating cross-cultural perspectives;
- Adaptability and flexibility in response to the ever-changing external environment;
- Efficient use of resources to maximize value to those we serve;
- Excellence and innovation in education, scholarship/research, and service, including outreach to the community;
- A productive, satisfying work and learning environment that is built upon cross-disciplinary and cross-campus collaboration;
- Integration of liberal arts and basic sciences with professional studies;
- Scholarship that contributes to developing knowledge, improving health sciences education, and improving health care and health outcomes; and
- Education that fosters developing the whole person.

MCPHS University SOP-W/M educates students to become competent pharmacists, capable of providing contemporary pharmacy care to patients in all practice areas and in collaboration with other healthcare providers. The school provides an accelerated learner-centered environment that promotes critical thinking, problem solving, communication skills development, scholarship, professionalism, and a spirit of caring and responsibility through the use of innovative and creative teaching methods, state-of-the-art technology, and an expert, dynamic and diverse faculty.

The SOP-W/M embraces the following set of core values that reflect commitment to the faculty and staff and to preparing competent, caring, ethical pharmacy professionals to meet the public's need for high quality health care.

- Honesty, integrity, professionalism, and personal responsibility;
- Respect for diversity and appreciation of cross-cultural perspectives;
- Adaptability and flexibility in response to the ever-changing external environment;
- Effective and efficient use of resources to maximize value to those we serve;
• Excellence and innovation in pharmacy education, scholarship, and service (including outreach to the community);
• A productive, satisfying work and learning environment;
• Integration of the pharmaceutical sciences with professional studies;
• Scholarship that contributes to knowledge development, improvement of pharmacy education, and promotion of pharmacy care and health outcomes;
• Experiences which foster interprofessional collaboration among health care team members delivering patient-centered care;
• Leadership opportunities that advance personal and professional goals;
• Lifelong learning and continuing professional development;
• Retention, development, and engagement of students and alumni;
• Growth and development of certificate programs, dual degrees, and postgraduate training opportunities.

Professional Competencies for PharmD Programs


Curricular Outcomes of the SOP-W/M Pharm Program

Curricular Objectives of the SOP-W/M

Course Specific Objectives of a lecture/exercise/assignment

(“After this session/exercise, the student should be able to do the following:”)

Skills/abilities necessary to achieve a the Learning Objective

(“To achieve this objective, the student must be able to:”)

Deliver Forwards
1.1 Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.

2.1. Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).

2.2. Medication use systems management (Manager) - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.

2.3. Health and wellness (Promoter) - Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.

2.4. Population-based care (Provider) - Describe how population-based care influences patient-centered care and influences the development of practice guidelines and evidence-based best practices.

3.1. Problem Solving (Problem Solver) – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

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

3.3. Patient Advocacy (Advocate) - Assure that patients' best interests are represented.

3.4. Interprofessional collaboration (Collaborator) – Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

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

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

4.1. Self-awareness (Self-aware) – Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.
4.2. Leadership (Leader) - Demonstrate responsibility for creating and achieving shared goals, regardless of position.

4.3. Innovation and Entrepreneurship (Innovator) - Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

4.4. Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.
Curricular Outcomes and Corresponding Curricular Objectives

1.1. Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.

1.1.1. Develop and demonstrate depth and breadth of knowledge in pharmaceutical, social/behavioral/administrative, and clinical sciences.

1.1.2. Articulate how knowledge in foundational sciences is integral to clinical reasoning; evaluation of future advances in medicine; supporting health and wellness initiatives; and delivery of contemporary pharmacy services.

1.1.3. Integrate knowledge from foundational sciences to explain how specific drugs or drug classes work and evaluate their potential value in individuals and populations.

1.1.4. Apply knowledge in foundational sciences to solve therapeutic problems and advance patient-centered care.

1.1.5. Critically analyze scientific literature related to drugs and disease to enhance clinical decision making.

1.1.6. Identify and critically analyze emerging theories, information, and technologies that may impact patient-centered and population based care.

1.1.7. Given a patient case, complete an appropriate assessment of medical and drug-related problems

2.1. Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).

2.1.1. Collect subjective and objective evidence related to patient, medications, allergies/adverse reactions, and disease, by performing patient assessment (including physical assessment) from chart/electronic health records, pharmacist records and patient/family interviews.

2.1.2. Interpret evidence and patient data.

2.1.3. Prioritize patient needs.

2.1.4. Formulate evidence based care plans, assessments, and recommendations.

2.1.5. Implement patient care plans.

2.1.6. Monitor the patient and adjust care plan as needed.

2.1.7. Document patient care related activities.
2.1.8 Identify correct or incorrect calculated dosages to avoid medication errors [PSW 312 suggested this addition]

2.2. Medication use systems management (Manager) - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.

2.2.1. Compare and contrast the components of typical medication use systems in different pharmacy practice settings.

2.2.2. Describe the role of the pharmacist in impacting the safety and efficacy of each component of a typical medication use system (i.e., procurement, storage, prescribing, transcription, dispensing, administration, monitoring, and documentation).

2.2.3. Utilize technology to optimize the medication use system.

2.2.4. Identify and utilize human, financial, and physical resources to optimize the medication use system.

2.2.5. Manage healthcare needs of patients during transitions of care.

2.2.6. Apply standards, guidelines, best practices, and established processes related to safe and effective medication use.

2.2.7. Utilize continuous quality improvement techniques in the medication use process.

2.3. Health and wellness (Promoter) - Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.

2.3.1. Describe systematic preventive care, using risk assessment, risk reduction, screening, education, and immunizations.

2.3.2. Provide prevention, intervention, and educational strategies for individuals and communities to improve health and wellness.

2.3.3. Participate with interprofessional healthcare team members in the management of, and health promotion for, all patients.

2.3.4. Evaluate personal, social, economic, and environmental conditions to maximize health and wellness.

2.4. Population-based care (Provider) - Describe how population-based care influences patient-centered care and influences the development of practice guidelines and evidence-based best practices.

2.4.1. Assess the healthcare status and needs of a targeted patient population.

2.4.2. Develop and provide an evidence-based approach that considers the cost, care,
access, and satisfaction needs of a targeted patient population.

2.4.3. Participate in population health management by evaluating and adjusting interventions to maximize health.

3.1. Problem Solving (Problem Solver) – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

3.1.1. Identify and define the primary problem.

3.1.2. Define goals and alternative goals.

3.1.3. Explore multiple solutions by organizing, prioritizing, and defending each possible solution.

3.1.4. Anticipate positive and negative outcomes by reviewing assumptions, inconsistencies, and unintended consequences.

3.1.5. Implement the most viable solution, including monitoring parameters, to measure intended and unintended consequences.

3.1.6. Reflect on the solution implemented and its effects to improve future performance.

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

3.2.1. Conduct a learning needs assessment of constituents who would benefit from pharmacist-delivered education (e.g., patients/caregivers, technicians and interns, pharmacy students, fellow pharmacists, other healthcare providers, legislators).

3.2.2. Select the most effective techniques/strategies to achieve learning objectives.

3.2.3. Demonstrate the ability to coordinate educational efforts with other healthcare providers, when appropriate, to ensure a consistent, comprehensive, and team-based encounter.

3.2.4. Ensure instructional content contains the most current information relevant for the intended audience.

3.2.5. Adapt instruction and deliver to the intended audience.

3.2.6. Assess audience comprehension.
3.3. **Patient Advocacy (Advocate)** - Assure that patients’ best interests are represented.

- 3.3.1. Empower patients to take responsibility for, and control of, their health.
- 3.3.2. Assist patients in navigating the complex healthcare system.
- 3.3.3. Ensure patients obtain the resources and care required in an efficient and cost-effective manner (e.g., triage to social and/or other healthcare services).
- 3.3.4. Clearly, accurately, and persuasively communicate the recommended pharmacotherapeutic care plans.

3.4. **Interprofessional collaboration (Collaborator)** – Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

- 3.4.1. Establish a climate of shared values and mutual respect necessary to meet patient care needs.
- 3.4.2. Define clear roles and responsibilities for team members to optimize outcomes for specific patient care encounters.
- 3.4.3. Communicate in a manner that values team-based decision making and shows respect for contributions from other areas of expertise.
- 3.4.4. Foster accountability and leverage expertise to form a highly functioning team (one that includes the patient, family, and community) and promote shared patient-centered problem solving.

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

- 3.5.1. Recognize the collective identity and norms of different cultures without overgeneralizing (i.e., recognize and avoid biases and stereotyping).
- 3.5.2. Demonstrate an attitude that is respectful of different cultures.
- 3.5.3. Assess a patient’s health literacy and modify communication strategies to meet the patient’s needs.
- 3.5.4. Safely and appropriately incorporate patients’ cultural beliefs and practices into health and wellness care plans.

3.6. **Communication (Communicator)** – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

- 3.6.1. Interview patients using an organized structure, specific questioning techniques (e.g., motivational interviewing), and medical terminology adapted for the audience.
- 3.6.2. Actively listen and ask appropriate open and closed-ended questions to gather
information.

3.6.3. Use available technology and other media to assist with communication as appropriate.

3.6.4. Use effective interpersonal skills to establish rapport and build trusting relationships.

3.6.5. Communicate assertively, persuasively, confidently, and clearly.

3.6.6. Demonstrate empathy when interacting with others.

3.6.7. Deliver and obtain feedback to assess learning and promote goal setting and goal attainment.

3.6.8. Develop professional documents pertinent to organizational needs (e.g., monographs, policy documents).


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

4.1.1. Use metacognition to regulate one’s own thinking and learning.

4.1.2. Maintain motivation, attention, and interest (e.g., habits of mind) during learning and work-related activities.

4.1.3. Identify, create, implement, evaluate and modify plans for personal and professional development for the purpose of individual growth.

4.1.4. Approach tasks with a desire to learn.

4.1.5. Demonstrate persistence and flexibility in all situations; engaging in help seeking behavior when appropriate.

4.1.6. Strive for accuracy and precision by displaying a willingness to recognize, correct, and learn from errors.

4.1.7. Use constructive coping strategies to manage stress.

4.1.8. Seek personal, professional, or academic support to address personal limitations.

4.1.9. Display positive self-esteem and confidence when working with others.

4.2. Leadership (Leader) - Demonstrate responsibility for creating and achieving shared goals, regardless of position.
4.2.1. Identify characteristics that reflect leadership versus management.

4.2.2. Identify the history (e.g., successes and challenges) of a team before implementing changes.

4.2.3. Develop relationships, value diverse opinions, and understand individual strengths and weaknesses to promote teamwork.

4.2.4. Persuasively communicate goals to the team to help build consensus.

4.2.5. Empower team members by actively listening, gathering input or feedback, and fostering collaboration.

4.3. Innovation and Entrepreneurship (Innovator) - Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

4.3.1. Demonstrate initiative when confronted with challenges.

4.3.2. Develop new ideas and approaches to improve quality or overcome barriers to advance the profession.

4.3.3. Demonstrate creative decision making when confronted with novel problems or challenges.

4.3.4. Assess personal strengths and weaknesses in entrepreneurial skills.

4.3.5. Apply entrepreneurial skills within a simulated entrepreneurial activity.

4.3.6. Conduct a risk-benefit analysis for implementation of an innovative idea or simulated entrepreneurial activity.

4.4. Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.

4.4.1. Demonstrate altruism, integrity, trustworthiness, flexibility, and respect in all interactions.

4.4.2. Display preparation, initiative, and accountability consistent with a commitment to excellence.

4.4.3. Deliver patient-centered care in a manner that is legal, ethical, and compassionate.

4.4.4. Recognize that one's professionalism is constantly evaluated by others.

4.4.5. Engage in the profession of pharmacy by demonstrating a commitment to its continual improvement.