

School of Pharmacy – Worcester/Manchester
Curriculum Outcomes

Adopted from: Medina MS, Plaza CM, Stowe CD, et al. Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes 2013. Am J Pharm Educ.; 2013;

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.

Curriculum Outcomes and Corresponding Curriculum 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.²

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).
- 3.6.9. Document patient care activities clearly, concisely, and accurately using appropriate medical terminology.

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.