

**Core Program-Level Goals and
Ability-Based Outcomes for Pharm.D. Education
College of Pharmacy
The Ohio State University**

Executive Summary:

The primary mission of the OSU Pharm.D. program is to provide a professional education that enables students to become exemplary patient care providers who serve as the responsible *medication* experts in the healthcare delivery system. The purpose of this document is to define the set of program-level goals and ability-based outcomes that must be achieved to accomplish that mission.

The conceptual framework for Pharm.D. education described in this document results in six program-level goals:

Goal 1. Attitudes and behaviors - The graduate will exemplify the attitudes and behaviors of a professional healthcare provider.

Goal 2. Knowledge - The graduate will possess the knowledge that is required for exemplary pharmacy practice, including a comprehensive understanding of drugs and the determinants of drug action.

Goal 3. Component Skills - The graduate will possess the skills that are essential components of exemplary pharmacy practice.

Goal 4. Problem solving ability - The graduate will use a systematic process to identify and seek optimal solutions for patient and medication use system problems.

Goal 5. Providing direct patient care - The graduate will be able to provide exemplary medication-related patient-centered and population-based care, including care related to disease prevention and health promotion, acute illness or injury, chronic disease, and transitions of care.

Goal 6. Managing the medication use system - The graduate will be able to effectively contribute to the management of the human, physical, technological, and financial resources of the medication use system within which they practice to help assure the safety, effectiveness, efficiency, and cost-effectiveness of that system in meeting patient healthcare needs.

A total of 69 ability-based outcomes are defined for these six goals. The goals and outcomes are consistent with current draft ACPE accreditation standards, as well as other professional standards, guidelines, and codes, and provide a solid basis for curricular design and both student and program assessment.

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Preamble:

The primary mission of the OSU Pharm.D. program is to provide a professional education that enables students to become exemplary patient care providers who serve as the responsible medication experts in the healthcare delivery system. The purpose of this document is to define the set of program-level goals and ability-based outcomes that must be achieved to accomplish that mission.

To graduate exemplary patient care providers, the program must provide learning experiences that enable students to develop three essential, interacting elements of patient care: professional attitudes and behaviors, requisite knowledge, and essential component skills. However, developing these three elements is not sufficient. The program must also provide learning experiences that enable students to develop the ability to identify, prioritize, and solve patient care-related problems. This problem solving ability includes the ability to integrate and apply attitudes and behaviors, knowledge, and skills to patient care, as well as the ability to think critically and creatively, and to make good decisions. Students who possess the three essential elements and have the ability to integrate and apply them to solve patient care-related problems have the prerequisites for providing exemplary patient care. This idea, illustrated in Figure 1 on the next page, provides the conceptual framework for the six goals of Pharm.D. education at The Ohio State University and the ability-based outcomes associated with each.

The learning outcomes in this document have several important characteristics. First, they are ability-based outcomes. This means that each outcome is an explicit statement of what students will be able to do as a result of Doctor of Pharmacy education at The Ohio State University, rather than exactly what they need to know or what skills they need to possess to do it.

Second, the learning outcomes in this document are program-level outcomes. They represent targeted student abilities upon completion of the curriculum as a whole, rather than as a result of completion of a single course or course sequence. Students are expected to achieve increasing levels of mastery of the outcomes as they progress through the curriculum. By graduation, all students will be able to competently perform the activities described by the outcomes at the level of a generalist, entry-level pharmacist.

Third, the learning outcomes are written with the understanding that a standard of excellence applies throughout. Modifiers such as “effectively”, “high quality”,

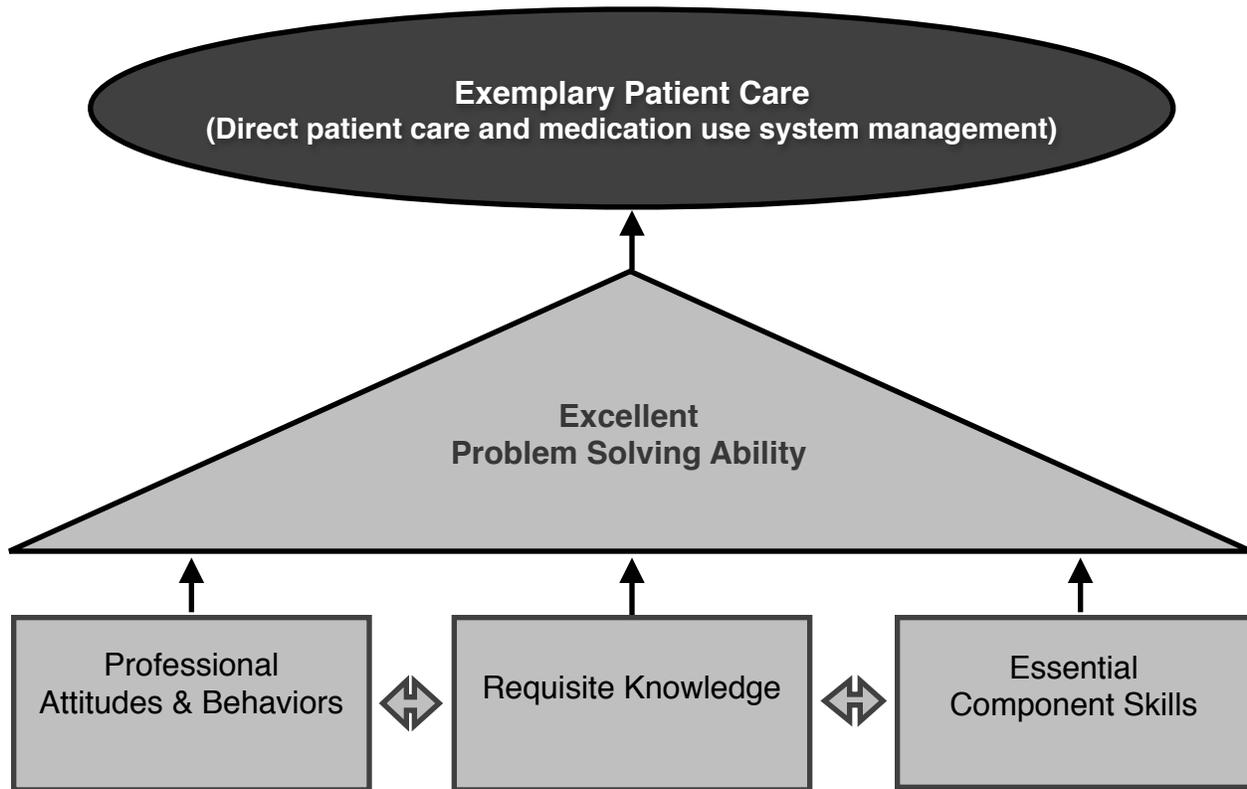


Figure 1. Conceptual framework for the goals of Pharm.D. education at The Ohio State University and their associated ability-based outcomes.

“appropriately”, and “accurately” are therefore not included unless they were deemed important to understanding the outcome.

Understanding and optimal use of the goals and ability-based outcomes require that everyone shares a common understanding of the various words and phrases used. Definitions of key terms are therefore provided in the glossary (Appendix A). Words and phrases included in the glossary are italicized in the document.

Many resources impacted the creation of this document. Key resources are included in the bibliography to acknowledge their contributions (Appendix B).

The program-level goals and ability-based outcomes presented in this document are intended to provide a solid basis for curricular design and both student and program assessment. These goals and outcomes should guide what is taught and what is assessed in the Doctor of Pharmacy program.

Finally, while preparing exemplary patient care providers is the primary mission of Doctor of Pharmacy education, the program also provides an avenue by which students may begin to prepare for other career opportunities. The program therefore aspires to foster interest in the creation of new knowledge to enhance patient health outcomes and quality of life and to prepare students for advanced pharmacy education.

GOAL 1. *Attitudes and behaviors* - The graduate will exemplify the attitudes and behaviors of a professional healthcare provider.

As evidence of having achieved this goal, the graduate will be able to

- 1.1. exhibit *integrity*, including the core values of honesty, respect, excellence, responsibility, duty, altruism, and courage, in all personal and professional activities.
- 1.2. strive to consistently use the *habits of mind* during important personal and professional activities.
- 1.3. exhibit *self-awareness*, including an understanding of how their knowledge, skills, thoughts, feelings, attitudes, and behaviors impact their personal and professional performance.
- 1.4. exhibit *empathy* and *compassion* in all interactions with patients, family members, and members of the professional community.
- 1.5. exhibit a commitment to enhancing personal and professional competence through continuous learning and *reflective practice*.
- 1.6. practice pharmacy in accordance with state and federal laws, ethical standards, best practices, and established processes.
- 1.7. engage with professional organizations and the broader community.

GOAL 2. *Knowledge* - The graduate will possess the *knowledge* that is required for exemplary pharmacy practice, including a comprehensive understanding of drugs and the determinants of *drug action*.

As evidence of having achieved this goal, the graduate will be able to

- 2.1. explain concepts, principles, and facts from the *biomedical, pharmaceutical, behavioral and social, administrative, and clinical sciences; research design; and biostatistics* that are essential to exemplary pharmacy practice.
- 2.2. continuously update and refine their *knowledge*.
- 2.3. recognize when their *knowledge* is insufficient and use appropriate resources to satisfy their need for additional *knowledge*.

GOAL 3. *Component Skills* - The graduate will possess the skills that are essential components of exemplary pharmacy practice.

As evidence of having achieved this goal, the graduate will be able to

- 3.1. communicate effectively orally and in writing.
- 3.2. document patient care activities accurately, clearly, and concisely.
- 3.3. use patient health records to access, document, and exchange information.
- 3.4. take a patient health history, including a *medication* history.
- 3.5. explain how a patient's beliefs, norms, and other contextual variables can impact their *care plan*.
- 3.6. perform physical examination procedures.
- 3.7. perform point-of-care laboratory and diagnostic tests.
- 3.8. read and interpret laboratory and diagnostic test reports.
- 3.9. find, manage, interpret, and apply drug- and disease-related information, scientific literature, practice guidelines, and evidence-based best practices to the care of patients.
- 3.10. identify and manage potential adverse drug events and drug interactions associated with the addition, adjustment, or discontinuation of *medications*.
- 3.11. educate an individual or group of individuals to address their learning needs and assure their understanding.
- 3.12. identify and develop strategies for overcoming barriers to health behavior change, including barriers to adherence and lifestyle modification.
- 3.13. perform *medication reconciliation* during *transitions of care*.
- 3.14. use *health information technology*, including *health information exchange*, as part of patient care.
- 3.15. receive and interpret electronic, written, and verbal *medication* orders.
- 3.16. perform calculations required to compound, dispense, and administer *medications*.
- 3.17. compound and prepare extemporaneous preparations and sterile products.

- 3.18. prepare, package, and label *medications* for administration or dispensing.
- 3.19. access, interpret, and apply pharmacy benefit plans.
- 3.20. administer *medications*.
- 3.21. contribute to the maintenance of a formulary, including the development of *medication use criteria* and policies.
- 3.22. perform *medication use evaluations*.
- 3.23. assure proper and safe *medication* storage.
- 3.24. read and interpret a financial statement.

GOAL 4. *Problem solving ability* - The graduate will use a systematic process to identify and seek optimal solutions for patient and medication use system problems.

As evidence of having achieved this goal, the graduate will be able to

- 4.1. describe and routinely use a systematic *problem solving process*.
- 4.2. identify and clearly define a problem, including all relevant *contextual factors* and the goal(s) of solving the problem.
- 4.3. identify potential solutions for a problem.
- 4.4. evaluate the potential solutions for a problem and select the best solution.
- 4.5. implement the best solution for a problem in a manner that takes relevant contextual factors into account.
- 4.6. evaluate the outcomes of an implemented solution for a problem and respond appropriately.
- 4.7. reflect on a solution implemented for a problem and the resulting outcomes to improve future performance.
- 4.8. employ strong *critical thinking, creative thinking, and decision making* during the *problem solving process*.
- 4.9. integrate and apply professional *attitudes and behaviors, requisite knowledge, and essential component skills* during the *problem solving process*.
- 4.10. compare and contrast the *problem solving process* and *patient care process*.

GOAL 5. Providing *direct patient care*. - The graduate will be able to provide exemplary *medication-related patient-centered* and *population-based care*, including care related to disease prevention and health promotion, acute illness or injury, chronic disease, and *transitions of care*.

As evidence of having achieved this goal, the graduate will be able to

- 5.1. assure the safe, accurate, and efficient preparation and distribution of *medications*.
- 5.2. establish and maintain *covenantal relationships* with patients.
- 5.3. systematically use the *patient care process* to provide *patient-centered care*.
- 5.4. collect and organize relevant patient information using health records and clinical skills.
- 5.5. assess patients to identify and prioritize their health and *medication-related* problems.
- 5.6. develop, implement, and document a patient-centered *care plan* to manage patients' *medication-related* problems.
- 5.7. demonstrate sound clinical judgment when the best course of action is unclear based on currently available evidence.
- 5.8. assess the *medication-related* healthcare needs of a targeted patient population and develop an evidence-based program to address those needs.
- 5.9. participate as an integral member of *interprofessional healthcare teams*.
- 5.10. provide *leadership*, helping healthcare teams create and achieve shared goals regardless of position.
- 5.11. serve as a *patient advocate*, representing the patient's best interests in all patient care activities.
- 5.12. use *innovation* and *entrepreneurial skills* to identify and take advantage of opportunities to improve the practice of pharmacy and enhance patient outcomes.

GOAL 6. Managing the *medication use system* - The graduate will be able to effectively contribute to the management of the human, physical, technological, and financial resources of the *medication use system* within which they practice to help assure the safety, effectiveness, efficiency, and cost-effectiveness of that system in meeting patient healthcare needs.

As evidence of having achieved this goal, the graduate will be able to

- 6.1. plan and manage a project.
- 6.2. understand and apply the policies and procedures of a pharmacy practice.
- 6.3. manage the drug selection, procurement, and inventory processes.
- 6.4. contribute to the appropriate and safe use of automated systems for drug dispensing and administration.
- 6.5. supervise pharmacy technicians' *medication* preparation and delivery activities.
- 6.6. identify, assess, and resolve potential or existing *medication* safety issues.
- 6.7. assess the cost-effectiveness of a patient care service or a specific therapeutic approach to a medical problem.
- 6.8. develop a new pharmacy practice or service, including a *business plan*.
- 6.9. configure workspaces and workflows that enable practices to provide safe, effective patient care in an efficient, cost-effective manner.
- 6.10. communicate and collaborate with prescribers, patients, caregivers, other healthcare providers, and administrative and support personnel to identify and resolve problems related to the medication use system.
- 6.11. provide *leadership*, helping a practice or business management team create and achieve shared goals regardless of position.
- 6.12. serve as a *patient advocate*, representing the patient's best interests in all management activities.
- 6.13. use *innovation* and *entrepreneurial skills* to identify and take advantage of opportunities to improve the practice of pharmacy and enhance organizational outcomes.

APPENDIX A: GLOSSARY

Ability - the capacity to do something successfully.

Attitude and behaviors - a complex mental state involving beliefs, feelings, values, and dispositions to act in certain ways and the resulting behaviors (e.g., having and exhibiting empathy and compassion for patients).

Biostatistics - a branch of mathematics that deals with the collection, analysis, interpretation, and presentation of biological data. (adapted from online Merriam-Webster dictionary definitions of statistics and biostatistics)

Business plan - “a formal statement of a set of business goals, the reasons they are believed attainable, and the plan for reaching those goals... There is no fixed content for a business plan. Rather, the content and format of the business plan is determined by the goals and audience. A business plan represents all aspects of business planning process declaring vision and strategy alongside sub-plans to cover marketing, finance, operations, human resources as well as a legal plan, when required.” (from www.en.wikipedia.org/wiki/Business_plan, accessed 09-08-2014)

Care plan - a plan for managing a patient’s healthcare problems. A pharmacist’s care plan typically includes planned/recommended pharmacological interventions, nonpharmacological interventions, patient monitoring, and patient education for each of the patient’s medication-related problems.

Compassion - having empathy for another person and, in addition, having the desire to take action to help that person. Compare with “empathy.” “Empathy” might briefly be defined as “I feel what you feel”, while “compassion” might be defined as “I feel what you feel and act skillfully to relieve your suffering if I can, or sit with you if you just need accompaniment in your pain (or joy).” (empathy vs. compassion comparison adapted from www.huffingtonpost.com/cindy-wigglesworth/empathy_b_2796460.html, accessed 09-08-2014)

Component skill - a discrete task or ability, the performance of which can be learned through experience and training, which is a component of the process of providing patient care. Examples include taking a blood pressure, taking a medication history, and communicating with clarity and precision.

Contextual factors - the circumstances that form the setting for an event, statement, or idea, and in terms of which it can be fully understood and assessed. (from www.oxforddictionaries.com) In the context of patient care, this would include factors such as the patient’s cultural beliefs, health literacy, social support system, insurance status, barriers to health behavior change, etc., as well as external factors such as the site of care.

Covenantal relationship - professional obligation between a pharmacist and a patient characterized by reciprocity between the two parties. “Considering the patient-pharmacist relationship as a covenant means that a pharmacist has moral obligations in response to the gift of trust received from society. In return for this gift, a pharmacist promises to help individuals achieve optimum benefit from their medications, to be committed to their welfare, and to maintain their trust.” (quotation from *APhA Code of Ethics for Pharmacists, accepted 1994*)

Creative thinking - both the capacity to combine or synthesize existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way characterized by a high degree of innovation, divergent thinking, and risk taking. (Association of American Colleges and Universities, 2010)

Critical thinking - the habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion. (Association of American Colleges and Universities, 2010.) Core cognitive critical thinking skills include interpretation, analysis, evaluation, inference, explanation, and self-regulation. (“The Delphi Report” on Critical Thinking, American Philosophical Association, 1990.) Critical thinking also includes a dispositional dimension, with defined affective characteristics that dispose a person to use cognitive critical thinking skills appropriately. Good critical thinkers possess the cognitive critical thinking skills and some or all of the affective dispositions. (“The Delphi Report” on Critical Thinking, American Philosophical Association, 1990.)

Decision making - the action or process of making decisions, especially important ones. (from www.oxforddictionaries.com)

Direct patient care - care delivered directly to a patient by healthcare provider, either as an individual or as part of a healthcare team. Note: This is intended to be a broad definition of direct patient care in keeping with the Draft ACPE Accreditation Standards 2016 and in contrast to the American College of Clinical Pharmacy’s more restrictive definition.

Drug action - the effects of a drug in the body, including the physical, biological, and chemical determinants of those effects. In this document, "explain drug action" means the ability to explain the pharmacokinetic and pharmacodynamic basis of a drug's effect(s) in specific situations.

Empathy - the ability to be aware of, to understand and to appreciate the feelings and thoughts of others. Empathy is “tuning in” (being sensitive) to what, how and why people feel and think the way they do. Being empathic means being able to “emotionally read” other people. Empathic people care about others and show interest in and concern for them. It is the ability to non-judgmentally put into words your understanding of the other person’s perspective on the world, even if you do not agree with it, or even if you find that perspective ridiculous. Being empathic

shifts an adversarial relationship to a collaborative relationship. (from Stein SJ and Book HE. THE EQ EDGE: Emotional Intelligence and Your Success. Jossey-Bass, Mississauga, ON, Canada, 2006) Compare with “Compassion.”

Entrepreneurial skills - skills that entrepreneurs effectively exhibit, such as decision making, strategic thinking, risk taking, confidence building, communicating ideas, motivating team members, tolerance of ambiguity, and taking responsibility for actions (CAPE Outcomes 2013). An entrepreneur is a person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk (from www.dictionary.com).

Habits of mind - intellectual behaviors “intelligent people use when they are confronted with problems, the resolutions to which are not immediately apparent.” They currently include the following:

1. Persisting
2. Managing impulsivity
3. Listening with understanding and empathy
4. Thinking flexibly
5. Thinking about thinking (metacognition)
6. Striving for accuracy
7. Questioning and posing problems
8. Applying past knowledge to new situations
9. Thinking and communicating with clarity and precision
10. Gathering data through all senses
11. Creating, imagining, innovating
12. Responding with wonderment and awe
13. Taking responsible risks
14. Finding humor
15. Thinking interdependently
16. Remaining open to continuous learning

(adapted from Costa AL and Kallick B (eds). Learning and Leading with Habits of Mind: 16 Essential Characteristics of Success. ASCD, Alexandria, VA, 2008.)

Health information technology - the application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision making. (from www.healthit.gov/policy-researchers-implementers/glossary, accessed 09-04-2014)

Health information exchange - the electronic movement of health-related information among organizations according to nationally recognized standards. The goal of health information exchange is to facilitate access to and retrieval of clinical data to provide safer, timelier, efficient, effective, equitable, patient-centered care. (from www.hrsa.gov/healthit/toolbox, accessed 09-04-2014)

Innovation - the act or process of introducing new ideas, devices, or methods (CAPE Outcomes 2013).

Integrity - adherence to moral and ethical principles (from www.dictionary.com). For purposes of this document, the core values associated with integrity are honesty, respect, excellence, responsibility, duty, altruism, and courage.

Interprofessional healthcare team - Two or more professions working together collaboratively. “Interprofessional” is contrasted with the term “interdisciplinary,” which focuses on when two or more fields within the same profession interact. (adapted from CAPE Outcomes 2013)

Knowledge - facts, information, concepts, and theories acquired through education or experience.

Leadership - the action of leading a group of people or an organization. (from www.oxforddictionaries.com) Taking responsibility for helping a team create and achieve shared goals regardless of position (from CAPE Outcomes 2013) is a major focus of leadership in this document. Leadership involves inspiring others. It is a function of knowing yourself, creating a culture of trust and open communication, having a vision that is well communicated, empowering others, taking a broad view of situations, and forming strategic alliances. (from CAPE Outcomes 2013)

Medication - any substance, other than food, used in the prevention, diagnosis, alleviation, treatment, or cure of disease. (Stedman’s Medical Dictionary, 27th edition). Used to include both prescription and nonprescription medications; vitamins and other nutritional supplements; botanical and nonbotanical natural medicines; and conventional and homeopathic medicines. Synonym: drug.

Medication reconciliation - the process of identifying the most accurate list of all medications that the patient is taking, including name, dosage, frequency, and route by comparing the medical record to an external list of medications obtained from a patient, hospital, or other provider. (from www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/7_Medication_Reconciliation.pdf)

Medication-related problems - potential or existing problems with respect to a patient’s medication for a given health problem. Four types of medication-related problems can occur: indication-drug therapy mismatch, effectiveness, safety, and adherence problems.

Medication use criteria - explicit criteria defining appropriate and inappropriate use of a specific medication or class of medications.

Medication use evaluation - a performance improvement method that focuses on evaluating and improving medication-use processes with the goal of optimal patient outcomes. MUE may be applied to a medication or therapeutic class, disease state

or condition, a medication-use process (prescribing, preparing and dispensing, administering, and monitoring), or specific outcomes. (from ASHP Guidelines on Medication-Use Evaluation. Am J Health-Syst Pharm. 1996;53:1953-1955.)

Medication use system - the combination of interdependent processes that share the common goal of appropriate, safe, effective, and efficient provision of patient drug therapy. Major processes in the medication use system include selecting and procuring; storing; prescribing; transcribing and verifying/reviewing; preparing and dispensing; and administering and monitoring drugs/drug orders. (Cohen, 1999; Otero, 2003; AHA & HRET & ISMP, 2002; JCAHO, 2003).

Patient advocate - supporting and empowering patients to make informed decisions, navigate the system to get the health care they need, and build strong partnerships with providers while working toward system improvement to support patient-centered care. Patient advocates are dedicated first and foremost to the well-being of the patients they serve. (from Gilkey MB, Earp JAL. Defining Patient Advocacy in the Post-Quality Chasm Era. NC Med J 2009;70:120-124)

Patient care - a broad term that includes patient care in all of its dimensions: acute care, chronic care, and disease prevention and health promotion; patient-centered care and population-based care; direct patient care and management of the medication use system within which direct patient care is provided; and care delivered in any setting.

Patient care process - the patient-centered process pharmacist's use in collaboration with other providers on the healthcare team to optimize patient health and medication-related outcomes. Using principles of evidence-based practice, pharmacists 1) collect patient information, 2) assess the patient to identify and prioritize their health and medication-related problems, 3) creates a care plan to address each medication-related problem, 4) implements the care plan in collaboration with other healthcare providers and the patient or caregiver, and 5) monitors and evaluates the results of the care plan, making adjustments as needed. (adapted from Joint Commission of Pharmacy Practitioners: Pharmacists' Patient Care Process, May 29, 2014)

Patient-centered care - patient care that is respectful of and responsive to individual patient preferences, needs, and values, and ensures that patient values guide all clinical decisions. (2013 CAPE Outcomes)

Population-based care - a comprehensive care approach where practitioners assess the health needs of a specific population, implement, and evaluate interventions to improve the health of that population, and provide care for individual patients in the context of the culture, health status, and health needs of the populations of which the patient is a member. (2013 CAPE Outcomes)

Problem solving - the process of designing, evaluating, and implementing a strategy to answer an open-ended question or achieve a desired goal. (Association of American Colleges and Universities, 2010)

Problem solving process - the systematic process used to solve problems including 1) identifying and clearly defining the problem, including all relevant contextual factors and the goal(s) of solving it, 2) identifying all potential solutions, 3) evaluating the potential solutions and selecting the best solution, 4) implementing the best solution in a way that takes relevant contextual factors into account, and 5) evaluating the outcomes of the implemented solution and responding appropriately.

Reflective practice - professional practice that incorporates critical reflection as a cornerstone. "Reflection is the ability to think and consider experiences, perceptions, ideas, etc. with a view to the discovery of new relations or the drawing of conclusions for the guidance of future action. In other words, reflection enables individuals to make sense of their lived experiences through examining such experiences in context. Reflection, although a cornerstone of reflective practice, is not the only skill needed. Reflective practice is...the process of turning thoughtful practice into a potential learning situation which may help modify and change approaches to practice. Reflective practice entails the synthesis of self-awareness, reflection, and critical thinking." (portion in parentheses adapted from Thompson S and Thompson N. The Critically Reflective Practitioner. Palgrave Macmillan, New York, 2008.)

Research design - the detailed planning of a study to answer a research question.

Science - 1) a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws. 2) systematic knowledge of the physical or material works gained through observation and experimentation. (www.dictionary.com)

Biomedical sciences - sciences, such as anatomy, biochemistry, immunology, microbiology, pathology, and physiology, that deal with the application of the principles of the natural sciences to medicine.

Clinical sciences - the integration and application of sciences such as the biomedical, pharmaceutical, and social/behavioral/administrative sciences and health informatics to patient care. Public health might be included as a clinical science or, alternatively, as a social science.

Natural sciences - sciences, such as biology, chemistry, and physics, that deal with the objects, phenomena, or laws of nature and the physical world.

Pharmaceutical sciences - the scientific disciplines, such as medicinal chemistry, natural products chemistry, pharmacology, toxicology,

pharmaceutics, biopharmaceutics, and pharmacokinetics, that collectively explain or seek to explain drug action.

Behavioral and social sciences - the sciences of behavior, including individual psychological processes and behavioral interactions, and the sciences of social interaction, including familial, cultural, economic, and demographic. The core areas focus on the understanding of behavioral and social processes and on the uses of these processes to predict or influence health outcomes or risk factors. (Association of American Medical Colleges. Behavioral and Social Science Foundations for Future Physicians: Report of the Behavioral and Social Science Expert Panel. November, 2011.) Public health, law, and ethics are sometimes included as behavioral and social sciences.

Administrative science - the organized body of knowledge that deals with optimal approaches to managing and being responsible for running a practice, business, or organization. Examples include financial management, healthcare administration, operations, marketing, and communications.

Self-awareness - an individual's knowledge and understanding of their knowledge, skills, thoughts, feelings, attitudes, and behaviors and how they impact their personal and professional performance.

Transitions of care - the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another. (www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/8_Transition_of_Care_Summary.pdf) Note that in some institutions, transitions of care could include movement of the patient from one setting of care to another within the same institution.

APPENDIX B: BIBLIOGRAPHY

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