Canadian Pharmacy Residency Board



Accreditation Standards for Advanced (Year 2) Pharmacy Residencies

FINAL May 2016

- © 2016 Canadian Society of Hospital Pharmacists
- © 2016 Société canadienne des pharmaciens d'hôpitaux

Canadian Pharmacy Residency Board Conseil canadien de la résidence en pharmacie

30 impasse Concourse Gate, Unit/unité 3
Ottawa, Ontario
K2E 7V7
Telephone 613-736-9733
Fax 613-736-5660
www.cshp.ca

Acknowledgements:

The CPRB Accreditation Standards for Advanced (Year 2) Pharmacy Residencies (2016) draws heavily on works published by other pharmacy education and accreditation bodies, including the Accreditation Council for Pharmacy Education (ACPE), the Association of Faculties of Pharmacy of Canada (AFPC), the Canadian Council for Accreditation of Pharmacy Programs (CCAPP), and the Royal College of Physicians and Surgeons of Canada.

The framework used in this document is based on the AFPC Educational Outcomes for First Professional Degree Programs in Pharmacy (Entry-to-Practice Pharmacy Programs) in Canada, which is based on the CanMEDS Physician Competency Framework.

Contents

				Page		
1.0	Introduction					
	1.1	1 Definition		4		
	1.2	Purpose of the Standards				
	1.3	Purpos	e of Advanced (Year 2) Pharmacy Residencies	5		
2.0	Standards for Program Administration					
	2.1	Qualifications		5		
		2.1.1	Organization	5		
		2.1.2	Department	7		
		2.1.3	Residency Program Administration	9		
		2.1.4	Preceptors	11		
		2.1.5	Residents	12		
	2.2	Program Planning and Operation		13		
		2.2.1	Admission Criteria, Policies, and Procedures	13		
		2.2.2	Educational Approach	14		
		2.2.3	Assessment and Evaluation	15		
		2.2.4	Program Completion	18		
3.0	Residency Program Competencies (Educational Outcomes)					
	3.1	Provide Evidence-Based Direct Patient Care as a Member of Interprofessional		18		
		Teams				
	3.2	Manage and Improve Medication-Use Systems		19		
	3.3	Exercise Leadership		20		
	3.4	Provide Medication- and Practice-Related Education				
	3.5	Demonstrate Research Skills				
4.0	Biblio	graphy		22		

1.0 INTRODUCTION

1.1 Definition

The Canadian Pharmacy Residency Board (CPRB) defines a year 2 residency in advanced pharmacy practice, subsequently referred to as "advanced (year 2) pharmacy residency," as an organized, directed, accredited program that builds on competencies developed through the successful completion of an accredited graduate clinical pharmacy degree (Doctor of Pharmacy as a second professional degree or Master's degree in advanced pharmacotherapy) or an accredited pharmacy residency. The advanced (year 2) pharmacy residency focuses on direct patient care, teaching, and research. The advanced (year 2) pharmacy residency increases or refines the pharmacist's knowledge, skills, and attitudes, to allow for the interprofessional management of complex patient cases at a level beyond that expected of a year 1 resident. Advanced (year 2) pharmacy residencies may focus on a specific therapeutic area (e.g., cardiology, oncology, infectious diseases), on a specific patient population (e.g., pediatrics, geriatrics) or on a specific type of practice (e.g., primary/ambulatory care, critical care). Advanced (year 2) pharmacy residencies develop interprofessional and leadership skills that can be applied to any position in any practice setting.

1.2 Purpose of the Standards

The CPRB Accreditation Standards for Advanced (Year 2) Pharmacy Residencies outline the basic criteria to be used in evaluating such programs in organizations that are applying for accreditation by the CPRB. The CPRB Accreditation Standards will be uniformly applied to all advanced (year 2) pharmacy residency programs in Canada that apply for accreditation. The accreditation process incorporates an evaluation of both the residency program and the pharmacy services provided. Each standard is followed by a description of the requirements to meet the standard. Throughout the Accreditation Standards, where the auxiliary verb "shall" is used, an absolute requirement is implied. Use of the auxiliary verb "should" denotes a guideline that is recommended for compliance. Within these Accreditation Standards, the following definitions apply:

Term	Refers to (definition):
Advanced pharmacy practice	Pharmacy practice beyond the level of a proficient practitioner, which involves either complex patients or complex therapy problems in a defined area of practice
Clinical environment	The environment in which patients are routinely assessed and receive care (e.g., patient care unit, clinic, office practice)
Coordinator	The individual accountable for planning, organizing, and executing tasks to ensure effective management of the residency program
Department	 Organizational structure for the oversight and/or provision of pharmacy services, as applicable to the organization in which the residency program operates
Defined area of practice	A practice setting where care is provided to a specific patient population (e.g., pediatrics, geriatrics) or where there is either a focus on a therapeutic area (e.g., cardiology, oncology, infectious diseases) or a specific type of practice environment (e.g., primary/ambulatory care, drug information, pharmacogenomics)
Extra-clinical environment	A practice environment that supports, but is removed from, the direct patient care (clinical) environment (e.g., drug information centre, pharmacogenetics laboratory, informatics operating centre)
Organization	The corporate entity that owns and operates the residency program (e.g., hospital, community pharmacy, family health team, health authority or region)

Primary partner	The organization that is primarily responsible for a jointly offered residency program
Primary preceptor	A qualified individual who is responsible for developing learning goals and objectives aligned with the residency program's intended outcomes and who ensures that a resident is supervised in all aspects of the rotation and associated learning activities
Program director	The individual who is accountable for the strategic planning and oversight of the residency program
Project supervisor	The individual who is assigned to support a resident's research project, who has the necessary skills and knowledge to complete research in a pharmacy environment
Research	An undertaking intended to extend knowledge through a disciplined inquiry or systematic investigation

The terms "coordinator", "department", "organization", "pharmacist", "preceptor", and "resident", where expressed in singular, shall also be read as plural.

It is the organization's responsibility to award the certificate of residency and to confer any associated credential. In accrediting a residency program, the CPRB does not presume to certify any individual resident. Reference may be made in the residency certificate to its accredited status, in accordance with the provisions of the CPRB Accreditation Standards.

1.3 Purpose of Advanced (Year 2) Pharmacy Residencies

The purpose of an advanced (year 2) pharmacy residency within a defined area of practice is to:

- refine, through experiences in a defined area of practice under the guidance of expert practitioners, selected
 competencies that were gained during study in an accredited Doctor of Pharmacy as a second professional
 degree program or a Master's program in advanced pharmacotherapy or a pharmacy residency program;
- enhance inter- and intra-professional care to a level that will serve as a model for others;
- develop and demonstrate leadership, change management, and research skills that will enable graduates to improve medication use for individual patients and groups of patients; and
- develop and demonstrate the ability to educate others.

The educational outcomes of an advanced (year 2) pharmacy residency include, at a minimum:

- 1. providing evidence-based direct patient care as a member of interprofessional teams;
- 2. managing and improving medication-use systems;
- 3. exercising leadership:
- 4. providing medication- and practice-related education; and
- 5. demonstrating research skills.

2.0 STANDARDS FOR PROGRAM ADMINISTRATION

2.1 Qualifications

2.1.1 Organization

Standard

Advanced (year 2) pharmacy residencies shall be conducted in organizations (such as hospitals, primary care clinics, and health authorities or regions) whose governing bodies, senior management, professional staff, and employees have collaborated to seek excellence and have demonstrated substantial compliance with professionally developed and nationally applied criteria. The organizations shall have healthcare professionals who are qualified and who are

leaders in the residencies' defined area of practice.

Requirements

1. The organization that operates the advanced (year 2) pharmacy residency program shall meet accreditation standards, regulatory requirements, and other nationally applicable standards.

Required Evidence:

- a) A healthcare organization that participates in offering an advanced (year 2) pharmacy residency shall be accredited by Accreditation Canada, if the organization is eligible for such accreditation.
- b) A college, school, or faculty of pharmacy that participates in offering an advanced (year 2) pharmacy residency shall be accredited by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP).
- c) Other practice settings that participate in offering an advanced (year 2) pharmacy residency shall have demonstrated substantial compliance with applicable professionally developed and nationally applied standards.
- d) The organization's accreditation status and most recent survey report shall be available for review by the accreditation survey team.
- 2. Two or more organizations working in cooperation may jointly operate an advanced (year 2) pharmacy residency.

Required Evidence:

- a) The organizations shall have contractual arrangement(s) or signed agreement(s) that define clearly their respective responsibilities for all aspects of the residency program and that delineate the name of the jointly offered program for the purposes of conferring an advanced (year 2) pharmacy residency certificate or credential. Such contract(s) or agreement(s) shall be available for review by the accreditation survey team.
- b) Each organization governed by such a contract or agreement shall meet the Requirements of Standard 2.1.1. One organization shall be designated the primary partner and shall be responsible for all aspects relating to accreditation, including but not limited to applying for accreditation, paying fees, responding to accreditation survey reports, and acting as the point of contact with CPRB or its designates.
- c) In the event that the primary partner delegates day-to-day responsibility for the residency program to its partner organization (or one of its practice sites), the partner organization (or its practice site, as applicable) shall submit routine reports to the primary partner, and a method of on-site inspection by a representative of the primary partner shall be in place to ensure that the terms of the agreement are being met.
- d) All reports and inspections shall be documented and signed by representatives of all parties bound by the contract or agreement and shall be available for review by the accreditation survey team.
- 3. The organization that operates the residency program, or the primary partner defined in the agreement for a jointly offered residency program, shall maintain authority for the program and responsibility for its quality.
- 4. The organization that operates the residency program shall adhere to CPRB Accreditation Policies and Procedures and Residency Matching Service procedures.
- 5. The organization that operates the residency program shall have sufficient resources to achieve the educational goals and outcomes of the program.

Required Evidence:

- a) A patient population base and a variety of professional practice experience opportunities to satisfy the requirements of the advanced (year 2) pharmacy residency program
- b) Expert professional pharmacy or other qualified healthcare profession preceptors in the defined area of practice of the residency, to provide adequate supervision and mentorship of trainees
- c) Program administration staff, preceptors, and administrative support staff to ensure program stability and delivery, to provide adequate supervision of trainees, and to support continuous quality improvement of the program
- d) Non-academic support for residency trainees, consisting of, at a minimum, workspace, equipment

- commensurate with that made available to pharmacist employees of the organization, access to library and drug information resources, and counselling and advising assistance
- e) Support for residents to attend at least one professional conference relevant to the defined area of practice
- 6. The organization that operates the residency program shall support the development of relationships between the department that operates the residency program and other areas of the organization, as well as affiliated academic institutions or their faculties (departments), for the purposes of advancing collaborative instruction that promotes interprofessional models of training and of advancing research and patient care.

Required Evidence:

- a) Administrative endorsement of initiatives such as collaborative research, collaborative projects, or committee work
- b) Sharing or exchange of instructional staff or space for patient care, research, or education purposes
- 7. The organization that operates the residency program shall provide teaching and learning environments that promote residents' safety and freedom from intimidation, harassment, and other forms of abuse.

2.1.2 Department

Standard

Advanced (year 2) pharmacy residencies shall be conducted in departments that have demonstrated a commitment to education and that provide an exemplary environment conducive to residency training.

Requirements

- 1. The department shall conduct the residency program in a manner that will ensure that the educational benefits to the resident take precedence over any services that the organization may obtain from the resident.
- 2. The department shall provide experience in different facets of the defined area of practice, as well as areas complementary to the defined area of practice.
 - a) Scheduling of residents on a duty (service) roster is acceptable, provided that the activities of the duty (service) roster are in keeping with the objectives of the advanced (year 2) pharmacy residency. Tasks related to the duty (service) roster shall be evaluated in a manner similar to evaluation of other academic requirements of the residency program, and the department shall not assign the resident to perform repetitive tasks solely to meet its service needs.
- 3. The department shall be led and managed by a professionally competent, legally qualified practitioner who provides effective leadership and management for the achievement of the short- and long-term goals of the department and the organization relating to pharmacy practice, delivery of pharmacy services, and medication use.

Required Evidence:

- a) Departmental mission or vision statement
- b) Document articulating the scope and depth of pharmacy services, including available staff to deliver such services
- c) Appropriate scope and depth of the department's involvement in education of staff (e.g., orientation, in-service training, continuing professional development) and students (e.g., entry-level or post–entry level professional or technical trainees)
- d) Organizational structure of the department
- e) Short- and long-term goals
- f) Quality improvement plan
- 4. The department should be able to show evidence of a spirit of collegiality; should demonstrate mutual understanding and agreement among preceptors and administrators on the mission, goals, and objectives of the residency program; and should accept the responsibilities associated with achieving the objectives of the residency program.

Required Evidence:

- a) Active participation of preceptors and administrators on the residency advisory committee or equivalent
- b) Defined method of avoiding competition for learning resources between advanced (year 2) pharmacy residents and pharmacy (year 1) residents, pharmacy students, and other healthcare professional trainees
- 5. The department shall form an integral part of the care delivery system within the organization in which the residency program operates.

Required Evidence:

- a) Pharmacy services of a scope and quality commensurate with identified needs of all patients served by the organization
- b) Pharmacy services that are organized to effectively meet patient needs in the core (required academic content) areas of the residency's defined area of practice
- c) Involvement in the overall planning of patient care services
- d) Pharmacy services that extend to all areas of the organization where medications for patients are prescribed, dispensed, administered, and monitored
- e) Pharmacists who are responsible for the procurement, preparation, distribution, and control of all medications used in the organization, including special access and investigational drugs, except where those responsibilities are assigned to another party through legal agreements
- 6. The department (if applicable) shall provide a safe and effective drug distribution system for all medications used within the organization, in a manner consistent with the patient population(s) being served, organizational needs, and patient safety considerations.

Required Evidence (as applicable for the areas in which the residency operates):

- a) The drug distribution system meets all applicable accreditation and provincial regulatory standards.
- 7. The department shall provide direct patient care services in a manner consistent with organizational and patient safety needs.

Required Evidence:

- a) Pharmacists are essential members of the interprofessional teams that deliver care in areas where the resident practises.
- b) In areas where residency training is provided, the pharmacy service is active at all times (i.e., 12 months a year).
- c) Pharmacists are responsible for identifying, preventing, and resolving drug therapy problems for individual patients and/or groups of patients.
- d) Pharmacists participate prospectively in the design and implementation of pharmaceutical care plans, including medication-therapy monitoring plans.
- e) Pharmacists work collaboratively with other team members to review the appropriateness and safety of medication orders.
- f) Pharmacists document all significant patient care recommendations and resulting actions, treatment plans, and/or progress notes in the appropriate section of the patient's health record or the organization's clinical information system, or another system with equivalent purpose, where applicable to the residency's defined area of practice (e.g., drug information or investigational drugs service).
- g) Pharmacists provide written and oral consultations regarding medication-therapy selection and management in the residency's defined area of practice.
- h) Management by pharmacists of diseases and/or medications is consistent with applicable laws, regulations, and practice-site policy.
- i) A system to support continuity of care is used routinely.
- j) The quality of services provided in the defined area of practice of the residency is evaluated routinely.
- 8. The department shall provide or make available essential drug information services for the defined area of practice, to allow the safe and optimal use of medications.

Required Evidence:

- a) Demonstrated ability to respond to drug information inquiries from the department's healthcare providers
- b) Participation in the development of medication-use and safe medication practice policies and procedures
- c) Reporting and monitoring of medication incidents and accidents (including reporting of adverse drug events), followed by development and implementation of appropriate modifications to the medication-use system to limit these negative outcomes
- d) Promotion and facilitation of the optimal use of medications through development of medicationrelated documents (such as educational tools, protocols, and order sets), active participation in continuing medical education for the organization's healthcare providers, and dissemination of recommendations following medication-use evaluations
- 9. The department shall work in collaboration with the organization and its other healthcare providers to advance the safety and quality of the medication-use system.

2.1.3 Residency Program Administration

Standard

The residency program shall be directed by pharmacists who hold to high professional ideals and who have the desire and aptitude to teach and administer the program.

- 1. The residency program shall be administered and directed by a professionally competent healthcare professional (hereafter referred to as the "program director") who is administratively responsible and fully accountable for the residency program, including compliance with these Accreditation Standards and with Accreditation Policies and Procedures.
- 2. The program director may delegate:
 - a) coordination of the program to a qualified residency coordinator;
 - b) administration responsibilities to one or more qualified persons; and
 - c) preceptor responsibilities to other qualified persons.
- 3. The program director shall have:
 - a) recognition from peers or professional organizations for leadership in the profession;
 - b) administrative experience of at least two years' duration, where administrative experience is interpreted to mean experience as a director, manager, coordinator, supervisor, senior or lead clinician, course master (coordinator), or faculty section head;
 - c) demonstrated ability to supervise, teach, and mentor residents, through past or present participation as a preceptor, tutor, course coordinator, or professor;
 - d) membership in a professional society; and
 - e) made a sustained contribution to advancing practice.
- 4. The residency coordinator shall:
 - a) have recognition from peers or professional organizations for leadership in the profession:
 - b) have completed an accredited pharmacy residency (CPRB or American Society of Health-System Pharmacists [ASHP] Commission on Credentialing) or equivalent advanced practice (post-licensure) training in the field of pharmacy (e.g., Fellowship, Doctor of Pharmacy as a second professional degree, advanced [year 2] pharmacy residency, Master's degree in advanced pharmacotherapy, or PhD) OR certification in the defined area of practice (where such certification is available from a recognized organization) OR equivalent experience, where equivalent experience is interpreted as three years' experience (in departments where the coordinator or director does not have experience in the defined area of practice, an assistant who is an expert in the practice area should be engaged);

- c) have an active pharmacy practice in the defined area of practice of the residency;
- d) hold membership in the Canadian Society of Hospital Pharmacists; and
- e) have made contributions to advancing pharmacy practice in the defined area of practice.

Required Evidence (at least four of the following):

- Peer-reviewed publications
- Fundamental, clinical, or pharmacy practice research
- Presentations at scientific meetings
- Preparation and delivery of continuing professional development programs
- Development of innovative pharmacy services or programs
- Teaching of undergraduate and/or graduate pharmacy students
- Appointments to committees, boards, and/or working groups related to health or academic services
- Active participation in professional organizations
- Service as a reviewer or editor for a peer-reviewed publication
- 5. Either the program director or the residency coordinator shall be a recognized pharmacy leader in the defined area of practice.
- 6. The program director shall ensure that administrative responsibilities for the residency program are assigned and fulfilled, in the areas of (at a minimum):
 - a) development and maintenance of policies and procedures for the residency program;
 - b) strategic planning for the residency program and its operations;
 - c) acquisition of resources to support and advance the residency program;
 - d) marketing, recruitment, and admission of individuals qualified to undertake residency training;
 - e) support, training, and supervision of residents, as well as consideration for their safety and wellness (e.g., when carrying out educational activities involving travel, patient encounters, house calls, after-hours consultations in isolated service areas);
 - f) support, training, and supervision of preceptors;
 - g) development of academic content and educational approach for the residency program;
 - h) program evaluation (continuous quality improvement);
 - i) assessment of learners (in terms of their attainment of educational outcomes);
 - j) maintenance of program archives (records); and
 - k) monitoring of residents' attendance and degree of preceptor oversight (e.g., during rotations, longitudinal service, duty (service) roster, and non-rotational experiences, such as courses and committee service).
- 7. The program director shall ensure that there is an environment of inquiry and scholarship in the program. A satisfactory level of research and scholarly activity shall be maintained by the program's faculty (preceptors, director, coordinator, instructors/teachers).
- 8. An Advanced (Year 2) Pharmacy Residency Program Advisory Committee (Year 2 RAC) shall be in place to assist the residency program director and coordinator in the planning, organization, and supervision of the program.
 - a) The committee's terms of reference, meeting minutes, and associated documents (e.g., position papers, projects) shall be available for review by the accreditation survey team.
 - b) The committee shall include representation from the program's residents; if there is more than one resident in the program, at least one representative shall be elected by the group.
 - c) The committee should include a representative from each participating site (facility or department) and each major component of the program.
 - d) The committee shall include representation from pharmacy primary preceptors and non-pharmacy primary preceptors. Committee members may be appointed or elected but must be active participants on the committee, as evidenced by regular attendance at meetings.

- e) The committee shall have representation external to the department, interpreted as any qualified individual who does not have line accountability to the department or a senior administrator to whom the department reports.
- f) Where two or more residency programs are operating, the residency advisory committees shall regularly communicate with each other.
- g) The committee shall communicate regularly with the department or organization and with residents.
- h) Where two or more residency programs are operating within the same organization, one residency advisory committee may be aligned, integrated, or partnered with another residency advisory committee, so long as it can be demonstrated that the needs of the year 2 program are being met.
- i) The committee shall organize appropriate remediation or probation for any resident who is experiencing difficulties meeting the appropriate level of competence.

2.1.4 Preceptors

Standard

The resident shall be under the preceptorship of qualified pharmacists or other qualified practitioners who have the experience, desire, and aptitude to teach.

Requirements

- 1. Each preceptor shall have appropriate competencies (knowledge, skills, attitudes) in the defined area of practice to act as a role model and to assist in development of the resident's skills.
 - a) Primary preceptors in the field of pharmacy shall:
 - maintain an active practice in the defined area of practice; and
 - have completed an accredited (CPRB or ASHP Commission on Credentialing) advanced (year 2) pharmacy residency OR a postgraduate clinical pharmacy degree (Doctor of Pharmacy as a second professional degree or Master's degree in advanced pharmacotherapy) OR have received certification in the defined area of practice (where such certification is available from a recognized organization) OR have sufficient practice experience in the defined area of practice to have contributed to the defined area of practice as outlined below (2.1.4.1.c).
 - b) Primary preceptors from non-pharmacy disciplines shall:
 - maintain an active practice in the defined area of practice; and
 - have completed postgraduate training at an advanced practice or specialist level as
 defined for the person's non-pharmacy profession OR have received certification in the
 defined area of practice (where such certification is available from a recognized
 organization) OR have sufficient practice experience in the defined area of practice to
 have contributed to the defined area of practice as outlined below (2.1.4.1.c).
 - c) All primary preceptors shall have contributed to the defined area of practice.

Required Evidence (at least two of the following):

- Peer-reviewed publications
- Fundamental, clinical, or pharmacy practice research
- Presentations at scientific meetings
- Preparation and delivery of continuing professional development programs
- Development of innovative services or programs
- Teaching of undergraduate and/or graduate students
- Appointments to committees, boards, and/or working groups related to health and academic services
- Active participation in professional organizations
- Service as a reviewer or editor for a peer-reviewed publication
- 2. A defined process shall be used for orientation of new preceptors.

- 3. Continuing preceptor development shall be made available to all instructional staff.
- 4. A primary preceptor shall be designated for each learning experience (hereafter referred to as a rotation).
 - a) Not less than 50% of residency days in the overall program shall involve supervision and oversight by a primary preceptor with training in the field of pharmacy.
 - b) The primary preceptor shall be responsible for ensuring that a training plan is established and that all assessments are completed.
 - c) Co-preceptors or secondary preceptors from pharmacy or from professions other than pharmacy may be appointed to assist in delivering the educational experience, but such preceptors shall be fully apprised by the primary preceptor of rotation objectives, the resident's progress to date, and assessment expectations of the program.
 - d) The primary preceptor shall develop specific goals and objectives for the resident, in consultation with the program director or coordinator. The residency director and the Year 2 RAC shall review rotation goals and objectives at least every two years.
- 5. Time shall be allocated for instruction, observation, and assessment of the resident in each rotation.
- 6. The primary preceptor shall review and confirm learning goals and objectives with the resident at the beginning of the rotation.
- 7. The primary preceptor shall provide timely and regular feedback to, and assessment of, the resident.
- 8. The primary preceptor shall be committed to self-assessment and making active use of constructive feedback provided by the resident, coordinator, program director, and (where applicable) other preceptors and members of the interprofessional team in the defined area of practice.
- 9. A project preceptor shall be assigned to the resident.

2.1.5 Residents

Standard

Advanced (year 2) pharmacy residents shall be individuals who hold to high professional ideals, who have a commitment to continued learning, and who wish to become experts and leaders in the residency's defined area of practice.

- 1. The resident shall have successfully completed an advanced clinical pharmacy degree (Doctor of Pharmacy as a second professional degree or Master's degree in advanced pharmacotherapy) *OR* an accredited pharmacy residency (CPRB or ASHP Commission on Credentialing).
- 2. The resident shall demonstrate a commitment to the profession by adhering to standards and participating in healthcare professions regulation:
 - a) The resident shall be registered as a pharmacist by the appropriate Canadian pharmacy regulatory authority; if not registered as a pharmacist at the time of application to the program, the resident shall become registered as a pharmacist at the earliest opportunity upon being admitted into the program.
 - b) The resident shall be a member of CSHP.
- 3. The resident shall contribute actively and constructively to the mission, vision, goals, education, evaluation, and quality improvement initiatives of the residency program and the department.
- 4. The resident shall be committed to making active use of constructive feedback provided by preceptors, the coordinator, and the program director.
- 5. The resident shall exhibit appropriate professional behaviours and relationships in all aspects of practice, including technology-enabled communication, reflecting honesty, integrity, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality.
- 6. The resident shall demonstrate a commitment to excellence in all aspects of practice and to active participation in collaborative care and service delivery.
- 7. The resident shall demonstrate a commitment to the well-being of other healthcare professionals to foster optimal patient care, and shall promote a culture that recognizes, supports, and responds effectively to colleagues in need.
- 8. The resident shall be responsible and accountable for acquiring all outcome competencies of an accredited

- advanced (year 2) pharmacy residency.
- 9. The resident shall engage in continuous improvement and enhancement of his or her professional activities through ongoing learning:
 - a) Develop, monitor, and revise a personal learning plan to enhance professional practice.
 - b) Regularly analyze performance, using various data and other sources to identify opportunities for learning and improvement.
 - c) Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice.

2.2 Program Planning and Operation

2.2.1 Admissions Criteria, Policies, and Procedures

Standard

The program shall use formal criteria, policies, and procedures for evaluation, ranking, and admission of qualified applicants to the residency program.

- 1. Each applicant's qualifications for acceptance into the residency program shall be evaluated using an established, formal, criteria-based process.
- 2. The residency program director and coordinator shall be responsible for selection of applicants who qualify for admission to the program.
 - a) Applicants may be offered benefits (including awards, bursaries, and/or return-of-service contracts or agreements, or equivalent); however, an applicant's acceptance or rejection of such benefits shall not influence the decision on admission to the residency program, nor shall it influence the decision regarding a resident's graduation from the residency program.
 - b) Applicants who are accepted into the program shall receive a letter outlining their acceptance. All terms and conditions (e.g., pre-requisite or concurrent course work, internships, structured practical training) shall be clearly outlined in the letter of offer/admission.
- 3. A resident's acceptance of an offer of admission to the program shall be documented in writing before the residency program begins.
- 4. A formal process shall be in place to assess the prior learning of each resident before the residency program begins.
- 5. The start and end dates of the resident's course of study shall be defined before the resident's entry into the program.
 - a) A full-time residency shall be defined as a minimum of 52 weeks of continuous training (including a maximum of 15 days approved vacation leave).
 - b) Residency training may occur on a part-time basis; however, such a program shall be composed of a minimum of 52 weeks of training (including a maximum of 15 days of approved leave or vacation), offered over not more than 24 months, and breaks in residency training shall not exceed 45 working days.
 - c) Non-residency days shall be clearly defined at the beginning of the program, and educational benefits to the resident shall take priority over services.
- 6. A program that grants credit for prior learning outside of an accredited residency program or transfer credit recognizing rotations completed with another accredited advanced (year 2) pharmacy residency program, shall:
 - a) grant credit in an amount not exceeding 25% of the total residency training period, interpreted to mean not more than 25% of the total residency days required to achieve the full-time or part-time program as defined in Standard 2.2.1.5;
 - b) have a well-defined and documented process in place for granting prior learning credit and/or transfer credit:
 - c) maintain documentation that provides evidence to support the decision to grant credit;

- d) retain documentation in the resident's training record regarding the program requirements for which prior learning credit or transfer credit was granted; and
- e) award transfer credit only for learning objectives or rotations completed at another accredited advanced (year 2) pharmacy residency program within 24 months before entering the program that is granting transfer credit.

2.2.2 Educational Approach

Standard

The program shall use a systematic process to design, plan, and organize an academic program to facilitate the resident's achievement of the intended educational outcomes.

- 1. The residency program director shall oversee development of learning goals and objectives for the residency program.
 - Learning goals and objectives shall address content from a list of topics (e.g., diseases, conditions, patient groups, service issues) in the defined area of practice in the context of all required educational outcomes of an advanced (year 2) pharmacy residency.
 - b) Learning objectives shall be clearly written, outcome-oriented, observable and measurable.
- 2. Rotations shall be selected to enable residents to meet all required educational outcomes of an accredited advanced (year 2) pharmacy residency and to cover the scope of the defined area of practice.
 - a) Learning goals and objectives shall be assigned to each rotation.
 - b) The residency program director and/or preceptor of each rotation shall write a detailed description (outline) of each experience.
- 3. The residency program shall use a variety of instructional methods (e.g., observation, case study, seminar), experiences, and delivery formats for experiences (e.g., longitudinal versus block scheduling, simulation, distance technology).
- 4. Residency activities shall provide:
 - a) exposure to contemporary pharmacy services for the prescribing, use, and management of medications in the treatment of patients (as applicable);
 - b) opportunities to develop interprofessional collaborative practice skills alongside other members of the team in the defined area of practice;
 - c) opportunities to develop skills to work effectively with patients, other healthcare professionals, administrators, educators, students, researchers, and change leaders;
 - d) opportunities to develop critical thinking, ethical and scientific reasoning, problem-solving, decision-making, time management, practice management, self-directed learning, professionalism, and change management skills; and
 - e) opportunities to develop and refine research skills and competencies.
- 5. In planning (scheduling) the program syllabus, an individualized plan shall be developed for each resident at the commencement of the resident's program.
 - a) Based on the assessment of the resident's prior learning, baseline knowledge, skills, attitudes, competencies, and interests, a broad written plan for the resident's program shall be developed, setting forth customized learning goals, as well as a schedule of activities for achieving those goals. The plan should build on the resident's strengths and address the areas for development.
 - b) The resident shall be given, at the beginning of the residency program, a detailed schedule of all planned rotations.
 - c) Residency experiences shall be structured to provide a systematic approach to enhancing the resident's problem-solving and decision-making skills, with progression to more complex problems within each rotation and throughout the residency year.
 - d) Residents shall provide service within a team (e.g., clinic, unit, consult service) for an extended duration or on a recurring basis at a frequency that supports development of interprofessional collaborative practice skills to the highest level to optimize patient safety.

- e) Individualization of a resident's experiences to account for specific interests must not interfere with achievement of the program's learning goals and objectives.
- f) The department shall balance the assignment of resident activities to meet program outcomes with concerns for patient safety and the resident's well-being.
- g) Scheduling of experiences need not be limited to the systems and services of the organization that operates the residency program; however, the training environment of each rotation should meet the requirements described in this Standard. Scheduling of experiences outside the defined area of practice shall not exceed 25% of a resident's total residency days.
- h) The level of responsibilities and the degree of supervision assigned during each rotation shall be consistent with the skill levels of the resident.
- 6. A formal process shall be in place to orient the resident to the residency program, the department, and the organization.
- 7. When the course of study begins, the resident shall receive a manual providing a comprehensive description of the residency program and containing, at a minimum, the following elements:
 - a) expectations of residents and preceptors;
 - b) intended educational outcomes of the program;
 - c) description (learning goals and objectives) of each rotation available to the resident;
 - d) description (learning goals and objectives; schedule) of the formal academic curriculum (e.g., mandatory course work, mandatory academic half-days or full days);
 - e) criteria for successful completion of the program;
 - f) policies concerning professional, family, and sick leave and the effect such forms of leave shall have on the resident's ability to complete the program;
 - g) policies governing scheduling of residency experiences, including duty (service) roster shifts if applicable;
 - h) procedures for assessments of the resident, preceptor, coordinator, director, and training site (rotation);
 - i) procedures for evaluation of the residency program;
 - j) processes for remedial action if deficiencies in the resident's progress are noted;
 - k) processes that shall be used to address all discrepancies in assessment; and
 - I) policies governing intimidation and harassment and other forms of abuse.
- 8. There shall be a defined process for initial selection, ongoing review, support, and feedback for all residency projects.
 - a) There shall be a defined process for solicitation, evaluation, and approval of project topics.
 - b) The time allotted for research project(s) shall not exceed 10 weeks (interpreted as 50 residency days).
 - c) The scope of the project(s) shall be such that it does not interfere significantly with other rotations.
 - d) The program director, coordinator, or a pharmacist affiliated with the department shall be designated the primary preceptor of the project.
 - e) A process shall be in place to provide ongoing review, support, and feedback to the resident.

2.2.3 Assessment and Evaluation

Standard

The pharmacy department shall conduct the program in a manner that reflects the principles of continuous quality improvement.

- 1. An ongoing review process shall be in place to assess:
 - a) the resident's performance;
 - b) the preceptor's performance;
 - c) the program director's and coordinator's performance:
 - d) rotation and learning environment (e.g., instructional delivery methods, facilities, personnel, and

- other resources) to ensure that they are used with optimal effectiveness and are conducive to developing the highest level of practice; and
- e) overall performance of the residency program.
- 2. Feedback on and discussion of the assessments and evaluations shall be conducted in an open and collegial atmosphere, allowing for a free discussion of the strengths and weaknesses of the resident, preceptor, instructors/teachers, and the overall operation of the program, while respecting the confidentiality of all parties.
 - a) Assessments shall be documented at the end of every rotation. If a rotation is more than three months long or the rotation is longitudinal, the midpoint feedback shall be conducted face-to-face and shall be documented.
 - b) Feedback sessions shall include face-to-face meetings. Assessments carried out via video conference or any other technology that allows verbal and non-verbal interaction should be used only if a face-to-face meeting is not logistically feasible.
 - c) Feedback shall also be provided to residents on an informal but regular basis.
- 3. The resident shall be assessed on development of competencies associated with the program.
- 4. Assessment tools that are competency- and criteria-based and that reflect the intended outcomes shall be available for all learning experiences and/or rotations in the program.
- 5. Residents shall be informed promptly when serious concerns exist, and they shall be given an opportunity to correct their performance.
- 6. With respect to the assessment process for residents, the program shall ensure that the following conditions are met:
 - a) There is a process for assessment and documentation of longitudinal development of competencies.
 - i. Clinical skills shall be assessed by direct observation and shall be documented.
 - ii. Attitudes and professionalism shall be assessed by various means, such as interviews with peers, supervisors, other healthcare professionals, and patients and their families.
 - iii. Communication abilities shall be assessed by direct observation of the resident's interactions with patients and families and with colleagues, and by review of written communications to patients or colleagues, particularly referral or consultation letters, where appropriate.
 - iv. Abilities to collaborate shall be assessed, including interpersonal skills in working with all members of the interprofessional team.
 - v. Teaching abilities shall be assessed by preceptors and learner(s) through direct observation of multiple educational formats (e.g., seminars, lectures, case presentations, clinical environment).
 - vi. The resident's ability to individualize patient care on the basis of patient-specific characteristics (such as age, gender, culture, and ethnicity) shall be assessed by direct observation.
 - b) Longitudinal assessment of a resident's progress shall be continuous and ongoing throughout the program, and shall be facilitated by direct interaction between the resident and the program director and coordinator for this purpose, minimally twice within the residency year.
 - c) The resident shall perform written self-assessments for each rotation in relation to the learning objectives established for each rotation, to assist the resident in identifying any objectives that were not met during the rotation.
 - i. The resident shall review the self-assessment with the preceptor (with or without the program director or coordinator) at the time of regularly scheduled evaluations.
 - d) The resident's achievements shall be regularly assessed in terms of the program and the learning goals and objectives of the rotation.
 - i. The assessment shall relate to the resident's progress in achieving goals and learning objectives.
 - ii. Subjective criteria such as personality traits should be considered only in relation to their

- effect on achieving goals and objectives.
- iii. A written final assessment shall be completed for each rotation. The final assessment shall be conducted within one week of completion of the rotation. The assessment meeting shall be conducted by the preceptor for each rotation or by the program director or coordinator, with input from the preceptors.
- iv. A written record of the final assessment of each rotation or residency requirement (e.g., for program requirements completed using a format other than a rotation) shall be maintained and reviewed with the resident and signed by the preceptor, the resident, and the program director and/or coordinator.

Preceptor's performance:

- 7. With respect to preceptors, an ongoing review process shall be in place that:
 - a) shall obtain feedback from the resident
 - i. The resident shall complete a written assessment of the preceptor at the end of each rotation, and feedback shall be provided to the preceptor in a timely fashion.
 - ii. The resident shall evaluate the preceptor on the basis of knowledge, skills, and attitudes as a role model and teacher.
 - b) shall provide the residency director and/or coordinator an opportunity to review and sign off on all assessments of the preceptor and the rotation in a timely fashion; and
 - c) is an effective mechanism to provide preceptors and instructors/teachers in the program with honest and timely feedback on their performance.

Program director's and coordinator's performance:

- 8. A process shall be in place to assess and provide feedback with respect to the roles of the residency program director and coordinator, as well as the site coordinators, in coordinating and supporting the residency program.
 - a) Residents' feedback shall be incorporated into the assessment process for the program director and coordinator.

Rotation and learning environment:

- 9. With respect to the rotation and training environment, an ongoing review process shall obtain feedback from the resident.
 - a) At the end of the rotation (at a minimum), the resident shall complete a written assessment of the rotation, based on its structure and content and the degree to which the learning objectives were met.
 - b) The written assessment shall be discussed with the preceptor.

Overall performance of the residency program:

- 10. The program shall have processes that meet the following needs:
 - a) to incorporate assessment of the resident, preceptor, program director, coordinator, and rotation (training environment) as part of the program's continual review and improvement process;
 - to communicate a resident's continuous progress in achieving the program's intended outcomes, both from one preceptor to the next preceptor and from one rotation to the next rotation (to ensure that each rotation is individualized on the basis of previous experiences);
 - c) to address discrepancies in assessment (e.g., disagreement about an assessment or feedback provided by a preceptor);
 - d) to remedy the situation if deficiencies in the resident's progress are noted;
 - e) to assess the resident's achievement of the intended educational outcomes of the program; and
 - f) to assess early withdrawals from the residency program.
- 11. The program shall maintain appropriate documentation regarding each residency trainee for a period of one full accreditation cycle (until the next on-site survey), including, at a minimum:
 - a) documentation of the evaluation, ranking, and admission of qualified applicants to the program, as defined in Standard 2.1.5:
 - b) residents' activities and schedules;
 - c) residents' self-assessments;

- d) assessments of each resident for all rotations and for other program requirements completed using a format other than a rotation (e.g., research projects, seminars, written learning objectives for presentations, papers or manuscripts); and
- e) experience records of each resident (e.g., monthly, quarterly, or biennial reports).

2.2.4 Program Completion

Standard

The organization shall attest to the requirements for successful completion of the residency program.

Requirements

- 1. Criteria shall be in place to define successful completion of the program.
 - a) Successful completion of the program shall reflect the final status of the resident and shall not be an average over the entire residency.
 - b) Assessment regarding the resident's successful attainment of program requirements shall be based on the views of preceptors directly involved in the resident's education and shall not be the opinion of a single evaluator.
- 2. The organization shall recognize those who have successfully completed the residency program by providing a transcript and/or awarding an appropriate certificate of residency.
 - a) A residency certificate shall not be issued to any individual who has failed to complete the prescribed program or to meet the intent of this Standard (i.e., Standard 2.2.4).
- 3. The organization shall maintain, in perpetuity, a record of:
 - a) all individuals who successfully complete the program, in the form of (at a minimum) a copy of the resident's transcript letter and/or residency certificate;
 - b) all individuals who are unsuccessful in completing the program; and
 - c) the academic years for which accreditation was granted.
- 4. Accredited programs should grant the ACPR2 (Accredited Canadian Pharmacy Resident Advanced Year 2) designation to residents who successfully complete the residency program.

3.0 RESIDENCY PROGRAM COMPETENCIES (EDUCATIONAL OUTCOMES)

3.1 Provide Evidence-Based Direct Patient Care as a Member of Interprofessional Teams Standard

The resident shall demonstrate expertise in providing evidence-based pharmacy care as a member of interprofessional teams in the residency's defined area of practice.

- 1. The resident is able to practise pharmacy at an expert level within his or her defined clinical scope of practice and expertise:
 - a) Place high priority on, and be accountable for, selecting and providing pharmacy services that are appropriate to the patient group or population.
 - b) Apply knowledge of clinical and pharmaceutical sciences relevant to the defined area of practice and to pharmacy practice and healthcare practice in general.
 - c) Recognize and respond to the complexity, uncertainty, and ambiguity inherent in pharmacy practice and healthcare practice in general.
 - d) Carry out professional duties in the face of multiple, competing demands.
 - e) Demonstrate the ability to proactively communicate issues to affected stakeholders, including patients and their families, and to make recommendations to resolve those issues.
 - f) Perform appropriately timed consultation, presenting well-documented assessments and recommendations in written and/or oral form using appropriate formats.
- 2. The resident is able to integrate best available evidence, contextualized to specific situations, into real-time

decision-making:

- a) Recognize uncertainty and knowledge gaps in clinical and other professional encounters, and generate focused questions to address them.
- b) Demonstrate proficiency in identifying, selecting, and navigating resources.
- c) Accurately appraise the literature as it relates to the situation(s).
- d) Integrate evidence into decision-making.
- 3. The resident shall perform patient-centred clinical assessments and establish care plans for individual patients:
 - a) Establish a respectful, professional, therapeutic relationship with the patient.
 - b) Confirm or establish goals of care.
 - c) Identify and reliably prioritize drug therapy problems.
 - d) Elicit a history and perform assessments in an organized, thorough, and timely manner.
 - e) Gather, appraise, and accurately interpret relevant information from appropriate sources, including the patient, the family, other providers, and the literature.
 - f) Prepare a care plan that includes consideration of the role and goals of the patient and the roles of other team members.
 - g) Proactively resolve drug therapy problems, monitor therapy and outcomes, and revise care plans on the basis of new information.
 - h) Establish timely follow-up and continuity of care plans.
 - Document and share, in written or verbal form, information about the issue, complying with legal, regulatory, and organizational requirements or any additional measures that will optimize clinical decision-making, patient safety, confidentiality, and privacy.
 - j) Demonstrate effective, safe transfer of care during transition of a patient to a different setting or stage of care, or during a transition of responsibility for care.
- 4. The resident shall advocate for the patient in terms of meeting the patient's health-related needs and shall be governed by the patient's desired outcome of therapy:
 - a) Work with patients and other team members to address the determinants of health, and consider disease prevention, health promotion, and health surveillance when working with individual patients in the clinical or extra-clinical environment.
 - b) Respond to the needs of the community or population by advocating for system-level change or by participating in a process to improve health in the community or population served.
- 5. The resident shall work effectively with other professionals:
 - a) Establish and maintain inter- and intra-professional working relationships for collaborative care.
 - b) Negotiate overlapping and shared responsibilities with inter- and intra-professional healthcare providers for episodic or ongoing care of patients.
 - c) Engage in effective and respectful shared decision-making with other care providers.
- 6. The resident shall work with inter- and intra-professional colleagues to prevent misunderstandings, manage differences, and resolve conflict:
 - a) Demonstrate a respectful attitude toward colleagues and members of inter- and intra-professional teams.
 - b) Work with others to prevent conflicts.
 - c) Manage complex conversations (e.g., those that are difficult to initiate or pursue).
 - d) Employ collaborative negotiation to resolve conflicts.
 - e) Respect differences, misunderstandings, and limitations in others.
 - f) Recognize one's own differences, misunderstandings, and limitations that may contribute to inter- and intra-professional tension.
 - g) Reflect on inter- and intra-professional team function.

3.2 Manage and Improve Medication-Use Systems

Standard

The resident shall contribute to the improvement of medication-use systems and pharmacy services in healthcare teams, organizations, and systems.

Requirements

- 1. The resident shall engage with members of the care team, including patients and their families where appropriate, to work collaboratively to improve medication-use systems and related systems in healthcare.
- 2. The resident shall prepare tools (e.g., protocols, checklists, clinical pathways, pre-printed orders) that have been shown to improve consistency and/or quality of care.
- 3. The resident shall make effective use of health informatics to improve the quality of patient care and to optimize patient safety.
- 4. The resident shall actively participate, as individuals and as members of a team, in the continuous improvement of healthcare quality and patient safety by accurately and appropriately recognizing, disclosing, and responding to adverse events, errors, and near misses.
- 5. The resident shall analyze how human and system factors influence decision-making and provision of services in the focused area of practice.
 - a) Recognize when the values, biases, or perspectives of patients, prescribers, other healthcare providers, regulators, or payers (e.g., provincial or third party) may affect the quality of care, and modify the approach to the issue appropriately.

3.3 Exercise Leadership

Standard

The resident shall demonstrate leadership in professional practice.

Requirements

- 1. The resident shall demonstrate personal responsibility for, and contribute to the quality improvement of, patient care and safety.
- 2. The resident shall contribute to strategies that improve the value of pharmacy care or healthcare delivery.
- 3. The resident shall facilitate changes to enhance pharmacy services outcomes or health outcomes for groups of patients.
- 4. The resident shall manage his or her own practice and career, setting priorities to balance time in practice and in personal life, and shall implement processes to ensure personal practice improvement.
- 5. The resident shall achieve, or shall have accumulated necessary evidence to achieve, additional prescriptive authority or other expanded scope privileges that are applicable to pharmacy services that are or could be delivered in the defined area of practice, to the extent that this is enabled through legislation in the province where the residency program operates.
- 6. The resident shall demonstrate respect for, pride in, and commitment to the profession through both appearance and actions.
- 7. The resident shall contribute to the body of professional knowledge through scholarly writing, through active engagement in review of manuscripts submitted for publication to a peer-reviewed journal, or through review of pharmacy-related award submissions for professional societies.

3.4 Provide Medication- and Practice-Related Education

Standard

The resident shall effectively respond to medication- and practice-related questions, and educate others.

- 1. The resident shall respond effectively and in a timely manner to medication- and practice-related questions received from others:
 - a) Conduct a literature search systematically.
 - b) Critically appraise the literature.
 - c) Formulate a response.
 - d) Communicate, verbally and in writing, responses to requests.
- 2. The resident shall facilitate the learning of students, other pharmacy residents, other healthcare professionals (including students of those professions), the public, and other stakeholders:
 - a) Promote a safe learning environment for the learner.

- b) Ensure that patient safety is maintained when learners are involved.
- c) Collaboratively identify the learning needs of others and prioritize their learning outcomes.
- d) Create an effective training/teaching plan that enables successful delivery and completion by the learner in the available timeframe (by selecting the instructional format and instructional media, organizing/sequencing the instructional content, defining learning goals and objectives, and creating an assessment plan that aligns with the learning goals and objectives).
- e) Demonstrate effective selection of an appropriate teaching role (e.g., direct instruction, coaching, facilitation, role modelling) and demonstrate effective teaching within that role.
- f) Demonstrate effective feedback and assessment.

3.5 Demonstrate Research Skills

Standard

The resident shall demonstrate the research skills necessary to undertake, conduct, and successfully complete a research project in the defined area of practice.

- 1. The resident shall pose clinically and scientifically relevant, appropriately constructed questions that are amenable to scholarly investigation.
- 2. The resident shall succinctly explain and justify the rationale for conducting the project.
- 3. The resident shall critique the possible methods of addressing a given question.
 - a) The resident shall explore the application of qualitative methods, as well as quantitative methods, to address the question.
- 4. The resident shall prepare a project protocol that incorporates consideration of ethical principles applicable to health-related research.
- 5. The resident shall establish, in collaboration with the project supervisor, the roles and responsibilities of members of the project team.
- 6. The resident shall collect data or oversee data collection by other team members, and shall analyze and interpret the data.
- 7. The resident shall prepare a written report of the project in a format suitable for publication in a peer-reviewed journal.
- 8. The resident shall present and defend the outcomes of the project.
 - a) The audience shall include team members from the defined area of practice.

4. BIBLIOGRAPHY

- Accreditation Council for Pharmacy Education (ACPE). Accreditation standards and guidelines for the professional program in pharmacy leading to the Doctor of Pharmacy degree. Chicago (IL): ACPE; 2006 [cited 2013 Mar 01]. https://www.acpe-accredit.org/pdf/FinalS2007Guidelines2.0.pdf
- American College of Clinical Pharmacy (ACCP). ACCP standards of practice for clinical pharmacists. Lenexa (KS): ACCP; 2014 Mar [cited 2014 May 15].
 - http://www.accp.com/docs/positions/guidelines/standardsofpractice.pdf
- American Society of Health-System Pharmacists (ASHP). ASHP accreditation standard for postgraduate year two (PGY2) pharmacy residency programs. Bethesda (MD): ASHP; 2005 [cited 2014 May 15]. http://www.ashp.org/doclibrary/accreditation/ASD-PGY2-Standard.aspx
- American Society of Health-System Pharmacists (ASHP). Program outcomes, educational goals, and educational objectives for postgraduate year two (PGY2) residencies in an advanced area of pharmacy practice.

 Bethesda (MD): ASHP; 2008 [cited 2014 May 15].

 http://www.ashp.org/menu/Accreditation/ResidencyAccreditation
- American Society of Health-System Pharmacists (ASHP). RLS decision process flow diagram. Bethesda (MD): ASHP; [cited 2014 May 15]. http://www.ashp.org/DocLibrary/Residents/RLS-Decision-Process-Diagram.aspx
- Association of Faculties of Pharmacy of Canada (AFPC). Educational outcomes for first professional degree programs in pharmacy (entry-to-practice pharmacy programs) in Canada. Edmonton (AB): AFPC; 2010 Jun 3 [cited 2014 Aug 25]. http://afpc.info/node/39
- Batalden P, Leach D, Swing S, Dreyfus H, Dreyfus S. General competencies and accreditation in graduate medical education. Health Aff (Millwood). 2002;21(5):103-11.
- Canadian Council for Accreditation of Pharmacy Programs (CCAPP). Educational standards and guidelines for the first professional degree in pharmacy programs (revised). Toronto (ON): CCAPP; 2014 Jul [cited 2014 Aug 25]. http://www.ccapp-accredit.ca/obtaining_accreditation/degree/standards/
- Canadian Hospital Pharmacy Residency Board. Accreditation standards January 2010. Ottawa (ON): Canadian Society of Hospital Pharmacists; 2009 [cited 2013 Mar 01]. http://www.cshp.ca/programs/residencyTraining/Surveyinfo e.asp
- Frank JR, Brien S, editors; Safety Competencies Steering Committee. The safety competencies: enhancing patient safety across the health professions. 1st ed. Ottawa (ON): Canadian Patient Safety Institute; 2008 [revised 2009 Aug; cited 2013 Mar 01].

 http://www.patientsafetyinstitute.ca/en/toolsResources/safetyCompetencies/Documents/Safety%20Competencies.pdf
- Frank JR, Snell L, editors. The draft CanMEDS 2015 physician competency framework series I. Ottawa (ON):
 Royal College of Physicians and Surgeons of Canada; 2014 Feb [cited 2014 Aug 25].

 http://www.royalcollege.ca/portal/page/portal/rc/common/documents/canmeds/framework/framework_series
 1 e.pdf
- Smith KM, Trapskin PJ, Armitstead JA. Adoption of duty-hour standards in a pharmacy residency program. Am J Health Syst Pharm. 2005;62(8):800-3.
- Royal College of Physicians and Surgeons of Canada (RCPSC). General standards applicable to the university and affiliated sites. Ottawa (ON): RCPSC; 2007 [revised 2011 Jul, 2013 Jun; cited 2014 Aug 25]. http://www.royalcollege.ca/portal/page/portal/rc/common/documents/accreditation/accreditation_purple_book_a_standards_e.pdf
- Royal College of Physicians and Surgeons of Canada (RCPSC). General standards of accreditation: the descriptors. Ottawa (ON): RCPSC; 2013 Jun [cited 2014 Aug 25].

 http://www.royalcollege.ca/portal/page/portal/rc/common/documents/accreditation/accreditation_blue_book_bdescriptors_e.pdf