



London Health Sciences Centre

# **PHARMACY SERVICES**

## **RESIDENCY PROGRAM INFORMATION**

**2024 - 2025**

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## PHARMACY SERVICES GENERAL RESIDENCY PROGRAM

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### PROGRAM DESCRIPTION

The London Health Sciences Centre (LHSC) Pharmacy Services General Residency Program is a 56-week post-graduate training program that aims to prepare pharmacy graduates for contemporary hospital practice. The residency program emphasizes pharmaceutical care as well as practical elements of distribution, education, administration and leadership, and outpatient services. The resident is taught through a combination of structured education programs and self-directed learning. The program has been in existence since 1967 and is accredited with the Canadian Pharmacy Residency Board (CPRB).

### PREREQUISITES

Graduates or prospective graduates of a Faculty of Pharmacy in which the curriculum meets the standards established by the Association of Faculties of Pharmacy of Canada may be considered for admission to the program. Candidates must be licensed or eligible for licensure as a student, intern or pharmacist with the Ontario College of Pharmacists (OCP). Residents must be registered with OCP as either an intern or a pharmacist for the duration of their residency. Residents must be members of the Canadian Society of Hospital Pharmacists (CSHP) during the residency.

### APPLICATION PROCEDURES

The application is completed and submitted through the [Pharmacy Residency Application and Matching Service \(PRAMS\)](#) of the Canadian Society of Hospital Pharmacists (CSHP) by the date stated by CSHP.

Twenty-four applicants will be chosen for face-to-face or virtual interviews with the Program Director, Residency Specialist and selected Pharmacy staff prior to acceptance.

### START DATE

The residency program accepts five residents between Victoria Hospital and University Hospital sites. Start date for residency is variable between July and September for 56 weeks.

## MEETINGS

Residents will attend/participate in Pharmacy Staff Meetings, Multidisciplinary Meetings, and other meetings as scheduled by the Residency Coordinator/Rotation Preceptor.

## CONFERENCES

Residents will be registered to attend the Annual Resident Clinical Conference in September and the CSHP Professional Practice Conference (PPC). The Department will provide time away to attend these conferences, and residents can apply for funding through Pharmacy's Professional Development Committee.

Additional conferences can be attended if the resident has a special interest and appropriate arrangements can be made with the Pharmacy Residency Specialist. The costs associated with any additional conferences will be the resident's responsibility. Each resident will have up to 5 conference days maximum.

### **Examples of alternative conferences include:**

Pediatric Pharmacy Advocacy Group (PPAG) – Spring  
CSHP - Ontario Branch Annual Meeting – October  
Drug Therapy Day – Spring

## VACATION

Each resident will have 10 vacation days. These vacation days must be arranged with the Pharmacy Residency Specialist, in conjunction with your Preceptor if vacation time occurs during a rotation. You will be scheduled for 2 weeks off the weeks of Christmas and New Years as a default. These days will count towards your 10 vacation days. Alternate dates may be negotiated with the Pharmacy Residency Specialist, Preceptor and Administrative Partner.

## PRESENTATIONS

Residents will give a variety of presentations to pharmacists, residents, students and other healthcare practitioners to develop the resident's presentation skills. Residents will present posters at CSHP, Professional Practice Conference and CSHP-Ontario Branch West Chapter Residency Research Night.

## RESIDENTS' LECTURE SERIES (RLS)

The Residents' Lecture Series is a series of 8-12 lectures organized by the Pharmacy Residency Specialist for the residents. The lectures are given by staff pharmacists on a series of topics that are likely to be beneficial for all of the residents during their residency year. Topics include, but are not limited to: how to set goals and objectives, documentation, vasopressors and inotropes, and personalized medicine. These topics will compliment, but not duplicate those covered at the Annual Residents Clinical Conference.

## EDUCATION

Residents will attend, regularly participate in and present at scheduled education events including Medical Grand Rounds, Medical Team Rounds, Pharmacy Breakfast Club, Journal Club, Strut Your Stuff, EBM Rounds, Resident's Report weekly/biweekly depending on site and Pharmacy Improving Patient Safety meetings. Residents are responsible for setting goals and objectives for every presentation.

## COMPENSATION & BENEFITS

Compensation is based on an hourly stipend of \$19.00 per hour plus 13% in lieu of benefits and 6% in lieu of vacation. When the resident works as a pharmacist, these hours will be paid as intern or licensed pharmacist as applicable. Residents work one evening per week as a pharmacist. Extra hours may be available depending on staffing needs at the time.

The resident is responsible to notify (in writing) the Pharmacy Residency Specialist, Manager or Director when they become fully licensed with the Ontario College of Pharmacists (OCP). Proof of licensure should be emailed to the Pharmacy Administrative Partner who will update the resident's file.

## ADDITIONAL REQUIREMENTS

Residents are required to conduct tours of the pharmacy for students or other guests of the department and participate in resident and student recruitment.

## ROTATIONS

MANDATORY ROTATIONS		TIME SPENT
<b>Orientation</b>	The resident will meet with the Residency Specialist, Director, past residents and Administrative Partner during their first week on site. They will have tours of the Pharmacy Department at Victoria Hospital and University Hospital. The resident will also complete Corporate Orientation.	1 week
<b>Inpatient Medication Systems</b>	Training in a computerized provider order entry system, unit dose and IV additive operations, manufacturing, packaging, narcotic distribution and closed-looped medication administration.	4 weeks
<b>Drug Information (LonDIS)</b>	Participation in the activities of the Drug Information Centre and provision of drug information to LHSC staff. Understanding literature sources and manuals and computerized retrieval and response formats will be highlighted.	3 weeks
<b>Evidence Based Medicine</b>	All residents will participate in a one-week Evidence Based Medicine (EBM) rotation. In addition, the resident may choose to participate in an additional 3-week elective rotation in EBM. See information below.	1 week
<b>Pediatrics</b> <ul style="list-style-type: none"> <li>• <b>General Pediatrics</b></li> <li>• <b>PCCU</b></li> <li>• <b>Hematology/Oncology</b></li> <li>• <b>NICU</b></li> </ul>	The resident will spend a minimum of 2 weeks on general paediatrics as part of their paediatric rotation. Disease states encountered may include sepsis, meningitis, bronchiolitis, asthma, pneumonia, febrile neutropenia, seizure disorders, metabolic disorders and gastroenteritis. The resident can spend another 2 weeks on general paediatrics or may choose to spend 2 weeks in the Neonatal Intensive Care Unit, Paediatric Critical Care Unit or paediatric haematology/oncology. The resident can also choose to spend 4 weeks on general paediatrics, followed by an additional 2-4 weeks in the NICU, PCCU or paediatric haematology/oncology.	4 weeks
<b>Antimicrobial Stewardship</b>	All residents will participate in a one-week Antimicrobial Stewardship (AMS) rotation.	1 week
<b>Infectious Disease</b>	The resident will spend 3 weeks working with the Infectious Disease pharmacists and consult service for Victoria and University Hospital.	3 weeks
<b>General Medicine</b>	The resident will develop the skills, tools, and attitudes needed to function as a General Medicine Pharmacist in a collaborative, patient/family centric dynamic. The resident will learn evidence-based and evidence-informed therapeutics of commonly encountered disease states, such as pneumonia, endocarditis, COPD, CHF and diabetes.	4 weeks

<b>Pharmacy Leadership</b>	During this one-week rotation, the resident will shadow the Director of Pharmacy in her daily work. While the content of the rotation will vary dramatically with the Director's schedule, the rotation will serve to enhance the resident's understanding of the role of pharmacy management and leadership in meeting the goals of the organization. Through assigned readings, focused discussions, and observational and participative experiences, the resident will gain knowledge and skills related to the key principles utilized in hospital pharmacy and health systems leadership.	1 week
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<p><b>Surgical</b></p> <ul style="list-style-type: none"> <li>• <b>General Surgery</b></li> <li>• <b>Orthopedics</b></li> <li>• <b>Vascular</b></li> <li>• <b>Gynaecology</b></li> <li>• <b>Neurosurgery</b></li> <li>• <b>Cardiovascular</b></li> </ul>	<p>The resident will spend 4 weeks on the surgical rotation of their choice.</p> <p><b>General Surgery</b> - Practicing the prevention and treatment of potential and actual drug therapy problems experienced by patients on the General Surgery service, the resident will have the opportunity to consolidate professional competencies developed in previous experiences, enhance interpersonal skills with patients and other team members, and grow the character necessary for a successful career as a pharmacist.</p> <p><b>Orthopedics</b> - The resident will develop the skills, tools, and attitudes needed to function as an Orthopedic Surgery Pharmacist. The resident will learn evidence-based and evidence-informed therapeutics of commonly encountered disease states and post-operative complications that occur in Orthopedic Surgery patients.</p> <p><b>Vascular</b> – Vascular surgery patients most commonly undergo revascularization, amputation or debridement. The resident will learn about the usual care of these patients, as well as the possible complications that may arise.</p> <p><b>Gynaecology</b> – The resident will develop skills needed to provide care for surgical patients as a member of a Multidisciplinary Care Team. The resident will learn about surgical prophylaxis, VTE prophylaxis, postop pain control and other issues as they arise in the surgical patient.</p> <p><b>Neurosurgery</b> - The resident will develop the skills and expertise to function as a Neurosurgery Pharmacist. Working together with medical residents, nurse practitioners and the allied health team, the resident will provide care for neurosurgery patients using the best practice standards of pharmaceutical care. Disease states covered during this rotation include surgical intervention for intracerebral hemorrhage, various brain tumours, deep brain stimulator insertion for Parkinson's Disease, epilepsy, and shunts.</p> <p><b>Cardiovascular</b> – The resident will develop the pharmaceutical skills that are required to manage core patients on this service, including those that receive a valve replacement and/or undergo a coronary bypass graft surgery. Alongside physicians and nurse practitioners, the resident will become an integral member of the team in managing these complex patients.</p>	<p>4 weeks</p>
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<b>Project</b>	The Residency Advisory Committee reviews all potential applications for residency projects. The resident is responsible for the development, research and preparation and presentation of a quality project with a preceptor. A final version of a manuscript is expected to be submitted before the end of the 13 <sup>th</sup> month. Residents are strongly encouraged to submit projects for publication in a peer reviewed journal.	6 weeks
<b>Clinical Practice</b>	At the end of the residency the resident assumes the role of a pharmacist and covers a specific clinical service. This integrates the knowledge gained in other areas of the residency into a final rotation.	4 weeks
<b>ELECTIVE ROTATIONS</b>		
Rotation availability depends on preceptor availability and scheduling. Some rotations are primarily ambulatory in nature (e.g. outpatient dialysis). Elective rotations are available as follows:		Approx 13-14 weeks
<b>Oncology</b> <ul style="list-style-type: none"> <li>• <b>Inpatient</b> <ul style="list-style-type: none"> <li>○ <b>Haematology</b></li> <li>○ <b>Solid Tumor / Radiation</b></li> </ul> </li> <li>• <b>Outpatient</b></li> </ul>	The resident can choose to spend their 4 weeks in out-patient oncology in the London Regional Cancer Program or on the in-patient oncology unit at Victoria Hospital. Depending on the site chosen and their preceptor, they will encounter hematological and solid organ cancers, as well as the complications that can arise secondary to radiation or chemotherapy and supportive care strategies.	4 weeks
<b>Psychiatry</b>	Provides a unique opportunity to work with a diverse group of mental health patients within a multidisciplinary team. Common disease states include schizophrenia, bipolar disorder, major depressive disorder and personality disorders. The resident will also have the opportunity to host medication group and get involved one-on-one with a variety of patients during the rotation.	4 weeks
<b>Emergency Medicine</b>	The resident will develop knowledge and skills in an emergency department environment to efficiently and effectively provide accurate, reliable and evidence-based drug information to the interdisciplinary emergency department team, patients and caregivers.	3 or 4 weeks
<b>Evidence Based Medicine (EBM)</b>	In addition to the mandatory 1-week rotation, the resident may choose to participate in a further 3-week elective rotation in EBM. This will include participation in the assessment of drug use within the institution, within a framework of evidence-based prescribing. The resident, through developing guidelines for appropriate use and collection of information on actual use, will develop an understanding of various surveillance techniques and change management strategy.	3 weeks

<b>Nephrology</b> <ul style="list-style-type: none"> <li>• Inpatient</li> <li>• Outpatient</li> </ul>	<p><b>Nephrology Inpatient:</b> The inpatient nephrology rotation will introduce the resident to medication considerations for patients with varying degrees and causes of renal dysfunction, including patients presenting with acute kidney injury, chronic kidney disease, and end stage renal disease on dialysis (both hemodialysis and peritoneal dialysis). Residents will be challenged to take previously learned material and drug information literature and apply it in the context of patients with renal failure, where evidence is often sparse.</p> <p><b>Nephrology Outpatient:</b> The resident will discover how to practice as a pharmacist in the field of ambulatory care nephrology. The resident will learn evidence-based therapeutics of commonly encountered medication issues in outpatient peritoneal and hemodialysis patients.</p>	4 weeks
<b>Neurology</b>	The resident will develop the skills and expertise to function as a Neurology Pharmacist. Working together with medical residents, nurse practitioners and the allied health team, the resident will provide care for neurology patients using the best practice standards of pharmaceutical care. The disease states covered during this rotation will include, but are not limited to: stroke, intracerebral hemorrhage, myasthenia gravis, multiple sclerosis, ALS, and epilepsy.	4 weeks
<b>Intensive Care</b> <ul style="list-style-type: none"> <li>• CCTC</li> <li>• MSICU</li> </ul>	Working within a highly established multidisciplinary team, the resident will focus on general standardized care of critically ill patients and on specific areas of pharmaceutical care in sepsis, hemodynamic support and sedation/analgesia/delirium.	4 weeks
<b>Cardiovascular Surgery Recovery Unit (CSRU)</b>	The Cardiac Surgery Recovery Unit (CSRU) at University Hospital provides care to patients who have recently undergone cardiac surgery. Common procedures are Coronary Artery Bypass Grafting (CABG), valvular replacement or repair (AVR, MVR, TVR), device implant (RVAD/LVAD) and cardiac transplant. The majority of patients spend a short time in the CSRU before transferring to the ward for convalescence. Other patients are more complex and may require longer ICU stays secondary to surgical complications (e.g. infection, acute kidney injury, stroke).	4 weeks
<b>Cardiology</b>	The resident will become an integral member of the team by working alongside the consultant, medical residents and nurse practitioners. Atrial fibrillation, heart failure, acute coronary syndromes are among the core disease states the resident will master by the end of 4 weeks.	4 weeks
<b>Cardiac Care Unit (CCU)</b>	The Cardiac Care Unit (CCU) at University Hospital most commonly provides care to patients after STEMI/NSTEMI events and/or after percutaneous coronary intervention (PCI) including angioplasty and stent placement. Patients may stay in the CCU while they await coronary artery bypass grafting (CABG) or pacemaker insertion.	3 or 4 weeks

<b>Transplant</b>	The Multi-Organ Transplant (MOTS) program at University Hospital is a pioneer in solid organ transplants. The resident will become familiar with the medications used for kidney, liver and possibly heart transplants in the perioperative period and to prevent rejection long-term. The resident will be actively involved with a multidisciplinary team and in providing discharge counselling to patients who have received a new organ transplant.	4 weeks
<b>Palliative Care</b>	The resident will learn about typical palliative care symptoms (physical and psycho-social) and treatment plans (medication and non-medication) used to help ameliorate these. They will review individual patients and assist in developing their medication care plans. They will be involved in the multidisciplinary team and bedside rounds, as well as educational sessions (provided by both the palliative care consultant and the medical residents on rotation). They will also have an opportunity to round with the palliative care consult team, to complement their experience with patients on the palliative care unit.	3 weeks
<b>Outpatient Pharmacy</b>	This rotation could include time spent in either Retail Pharmacy and/or the London Regional Cancer Program Pharmacy. Residents will work with an Outpatient Pharmacist to provide Pharmaceutical Care in an outpatient setting. Drug funding and patient counselling will be the key objectives.	2 weeks
<b>Respirology</b>	The resident will join a multidisciplinary team to learn about the usual care of respirology patients and the progression of chronic respiratory diseases, such as asthma, COPD, Cystic Fibrosis and pulmonary arterial hypertension. Infectious lung diseases encountered may include pneumonia, empyema and tuberculosis.	4 weeks
<b>Personalized Medicine</b>	The resident will participate as a member of the Personalized Medicine (PM) Team. The resident will help to identify patients who require the services of the PM Team, and will participate in the development of the recommendations for individual patients. The resident will also be exposed to the PM Laboratory and will have the opportunity to write up Case Reports to be published. Part of this rotation will be spent in the Outpatient Warfarin Clinic.	3 weeks